

**BellSouth** 

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August 28, 2002

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### WRITTEN EX PARTE

Ms Marlene H. Dortch Secretary Federal Communications Commission 445 12<sup>th</sup> Street, S.W. Washington, D.C. 20554

Re: CC Docket No. 01-338

#### Dear Ms Dortch:

On August 27, 2002 I met with Bill Maher, Chief of the Wireline Competition Bureau, and Jeffrey Carlisle, Deputy Chief of the Wireline Competition Bureau. The purpose of the meeting was to discuss issues that the Commission is considering in CC Docket 01-338. I highlighted the adverse effects that the Commission's current UNE-P requirements are having on ILEC earnings, returns on invested capital, and capital spending.

In the course of discussing these adverse effects, I also summarized results of various financial analyses of UNE-P that are contained in the attached reports. A one-page summary of points discussed in these reports also was reviewed, a copy of which is also attached.

In accordance with Commission rules, I am filing two copies of this notice and the attached responses and request that they be included in the record of the proceeding identified above.

Sincerely,

Robert T. Blau

**Attachments** 

cc: Bill Maher

Jeffrey Carlisle

## Problem with UNE-P from Wall Street's Point of View (Based on 2<sup>nd</sup> Q ILEC Financial Results)

- ILECs are losing retail lines and revenues to wireless, cable TV and UNE-P, but the cost of maintaining ubiquitous local networks remain roughly the same.
- Some state PSCs have abandoned any semblance of cost (including TELRIC) in setting wholesale rates, and instead are increasing resale discounts to levels that AT&T and other CLECs claim they need to operate profitably in residential markets.
- Lower UNE-P rates are discouraging CLECs from incurring the cost and risk of overbuilding ILEC facilities. UNEs (UNE-P, 61% vs. UNE-L, 39%) now account for 47% of all (20 million) CLEC access lines up from only 24% at YE 1999.
- As CLECs become more dependent on reselling ILEC network capacity, price competition will continue to intensify in part because service differentiation between ILECs and CLEC resellers is not a viable option.
- As price competition intensifies, further squeezing profit margins of all carriers, returns on capital will continue to deteriorate prompting facilities-based carriers to cut back capital spending that much more.
- At some point, reductions in cap ex will cause service quality to deteriorate much as it did in the Ameritech and US West states during the mid-to-late 1990s.
- If things get to that point everyone ILECs, CLECs, and consumers -- lose, and the damage done to the nation's communications infrastructure could be very difficult and costly to repair.
- The seriousness of these problems notwithstanding, the regulatory picture remains completely muddled.

10:10am EDT 24-Jul-02 Goldman Sachs (GOVERNALI NEWYORK NEWYORK) BLS Details: BLS: CUSTOMER LOSSES WITHOUT OFFSETTING COST CUTTING EXPLAINS WEAK ...

Goldman, Sachs & Co. Investment Research

FOR IMPORTANT INFORMATION ABOUT GOLDMAN SACHS' RATING SYSTEM AND OTHER DISCLOSURES, REFER TO THE END OF THIS MATERIAL, GO TO <http://www.gs.com/research/hedge.html,> OR CONTACT YOUR INVESTMENT REPRESENTATIVE.

BLS: CUSTOMER LOSSES WITHOUT OFFSETTING COST CUTTING EXPLAINS WEAK OUTLOOK

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* Over the last year, BLS lost a million retail lines and partially offset*
* this with the gain of half a million wholesale lines. We believe that
* the weak earnings this qtr, and the weaker outlook is a function of
* margin compression these losses produce. Such line loss, w/out

    sufficient offsetting expense cuts leads to the kinds of earnings

^{\star} compression we saw this qtr. Bad debt expense was not a significant new ^{\star}
* issue this qtr - vs 1Q it subtracted only an incremental $0.01/share.
* B/c of the inevitably slow reversal of access line trends, and the need *
* to trim expenses, we're cutting our ests for '02 from $2.35 to $2.16,
* and for '03, from 2.44 to 2.20, reflecting lower pension income.
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Frank J. Governali, CFA (Portland) 1 207-772-3300 - Investment Research Robert Barry (New York) 1 212-902-5677 - Investment Research Gregory Regan (Portland) 1 207-772-3533 - Investment Research Charles Minervino (Portland) 1 207-772-2273 - Investment Research

============ NOTE 9:35 AM July 24, 2002 ===================

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			Stk Lat		2 Week Range	Mkt Cap (mm)	YTD Pr Change	Cur Yield
BellSouth Co	orp.		MO 21	.30	43-21	40022.7	-44%	3.8%
BLS			<u>-</u>	arnings	s Per Sh	nare		_
EPS*	(US\$)	Mar	Jun	Sep	Dec	FY	CY	
•	2003 FY	NA	NA	NA	NA	2.20	NA	
	2002 FY	0.54A	0.53A	0.53	0.56	2.16	NA	
	2001 FY(A)	0.52	0.52	0.56	0.63	2.22	NA	
GSCOPE EPS*	(US\$)	Mar	Jun	Sep	Dec	FY	CY	
	2003 FY	NA	NA	NA	NA	NA	NA	

	2001	FY(A) 0	.53 N	IA	NA I	AN AN	NA
		-Abs	P/E on-	-Rel	P/E on	EV/NxtFY	LT EPS
		Cur	Nxt	Cur	Nxt	EBITDA	Growth
EPS*	FY	9.9X	9.7X	0.5%	0.6x	NA	NA
	CY	NA	. NA	NA	NA NA	NA	NA
GSCOPE EPS*	FY					NA	NA
	CY	NA	. NA	N.A	NA NA	NA	NA

NA

\_\_\_\_\_\_

NA

NA

NA

NA

2002 FY 0.43A

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\* ACCESS LINE TRENDS TELL THE STORY. Access lines declined 2.1%, worse than the first quarter decline of 1.8%, and certainly worse than the improvement to a loss of 1.3% that we had been modeling. The weakness was both a demand issue as well as a competitive issue. There are two big problems here. One is the absolute loss of lines, and the other is the conversion of a retail line to a highly discounted wholesale line. Both problems create a loss of revenue without any direct offsetting expense reductions. This explains why anticipating share loss (as opposed to reacting to it) is so critical for the Bells to achieve any kind of earnings growth in the future. Business line loss, both total and resale, is not trending as badly as residential. As such, we believe business is likely to reverse sooner than residential. Pressure on margins will continue because of the damaging effect of line loss and wholesale growth. Entering long distance in the remainder of its states is critical to BLS to help offset some of these customer losses.

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KEY TAKE-AWAYS FROM THE QUARTER - 1) DATA GROWTH SLOWING TO NORMAL LEVELS. BellSouth is now experiencing the slowdown in data growth that it seemed to be insulated from, as the rest of its RBOC peers were bringing numbers down last year and earlier this year. As an example, BLS reported data revenue growth of 13.9% in 1Q02, compared to 2.4% reported by SBC, and 8.5% reported by VZ. BLS is now guiding the street to mid-single digit data growth for the year, in-line with the other Bells, and down dramatically from previous guidance of mid-teen growth. 2) ACCESS LINE SLIDE WORSENS, INSTEAD OF FLATTENING. The impact of UNE-P competition and slow demand, is becoming painfully obvious, as direct customer lines are shrinking, and wholesale lines growing sharply. 3) WIRELESS GROWTH IN LINE. Cingular was a positive contributor in the quarter, but wireless as an industry is reflecting characteristics of a zero-sum game (i.e.one or two carriers achieve a leading growth rate in a quarter at the expense of everyone else). 4) COST CONTROL DIDN'T SAVE THE DAY. In most previous periods, a weak top line has been salvaged by tight cost control, but this didn't happen this period. Operating expenses rose relative to revenues in most categories. 5) RECOVERY FURTHER OUT. The telcos are pushing hope of a recovery even further out, best evidenced by BellSouth cutting CapEx guidance (excluding Cingular) for the year by \$500 million to \$3.7 to \$3.9 billion from \$4.2 to \$4.4 billion. Cingular also dramatically cut CapEx guidance from \$5.4 billion-\$5.8 billion, to \$4.2 billion-\$4.6 billion. As a result, at least FCF remains strong.

COMMUNICATIONS GROUP THE DISSAPPOINTMENT IN 2Q - The weakness was evident across the board: weak demand, competitive losses, and the failure of cost controls to make up the difference. We don't believe the higher bad debt expense explains much in the quarter, as according to the company, it subtracted only an incremental penny from earnings relative to the first quarter (about \$30 million pretax), and all of this was not attributed to the communications group.

The story of weak demand, competition, and cost pressures was evident in the numbers. Revenue came in about \$107 million below our \$7.24 billion estimate. Local service and network access were the primary contributors to

<sup>\*</sup> may differ from U.S. GAAP

the weakness, as data revenues came in \$176 million shy of our \$1.25 billion estimate, and revenue/line/month of about \$29.47 came in below our \$30.03 estimate.

On a consolidated basis, the same trends were evident, and are obvious in the comparison of actuals to our estimates below:

2Q02 actuals vs. GS estimates

	GS estimate 2Q02E	Actuals 2Q02a	Difference	% difference
Revenues				
Local Service	2,989	2,939	(50)	-1.7%
Network Access	1,210	1,182	(28)	-2.3%
Long Distance	186	213	27	14.5%
Other	368	337	(31)	-8.4%
Comms. Grp.	4,693	4,586	(107)	-2.3%
Dom. Wireless	1,470	1,500	30	2.0%
Latin America	525	597	72	13.7%
Advert. & Pub.	465	538	73	15.7%
Other	17	14	(3)	-17.6%
Total Revenues	7,170	7,235	65	0.9%
Operating Expenses:				
Op. & Support Exp	3,857	3,992	135	3.5%
D&A	1,358	1,353	(5)	-0.4%
Operating Income	1,955	1,890	(65)	-3.3%
EBITDA	3,313	3,243	(70)	-2.1%
Interest Expense	334	362	28	8.4%
Other Income (Exp)	65	50	(15)	-23.1%
Pre-Tax Income	1,686	1,578	(108)	-6.4%
Tax provision	602	582	(20)	-3.3%
Tax Rate	36%	37%	0.9%	2.5%
Normalized				
Net Income	1,084	996	(88)	-8.1%
Normalized EPS	0.57	0.53	(0.04)	-7.0%
Wtd Ave Shrs	1,888	1,882		

WORSE THAN EXPECTED ACCESS LINE DECLINE CONTRIBUTE TO SHORTFALL -- Access lines declined 2.1%, worse than the first quarter decline of 1.8%, and certainly worse than the improvement to a loss of 1.3% that we had been modeling. The weakness was both a demand issue as well as a competitive issue. Overall all, over the last year, BLS has lost a little more than a half-million lines, on a base of nearly 26 million. The decline was worse on direct retail lines, which were down one million. And this was offset by a half-million increase in wholesale lines. Because the wholesale lines might produce something like half the revenue of the retail lines, this is like losing on net the revenues from three-quarters of a million lines. On an annual basis, this may mean revenue loss of \$560 million. In the worse case scenario, if there is not an expense offset to this revenue loss, it would produce an EPS impact of \$0.19 per share. In the best case, where margins are unaffected, it could produce a nickel a share reduction in EPS. This wide range explains why anticipating share loss (as opposed to reacting to it) is so critical for the Bells to achieve any kind of earnings growth in the future.

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(continued...)
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# UNe-P: the Un-Profitable RBOC



Local competition pressuring RBOC profits

**Industry update** 

RBOCs' core profit center is under severe attack from competitive forces. Regulators have reduced UNE pricing such that CLECs are using UNE lines to penetrate the residential and small business markets. In our view, until UNE pricing becomes more rational, the RBOCs will suffer steeper profitability squeezes from CLECs using UNE lines.

- ▶ Lost ILEC profits: ILECs lost 1.5m lines in the last six months of 2001 in the form of UNEs (unbundled network elements) to CLECs, which we estimate comes to \$1bn in lost annualized sales, most of which is pure profit. In a six-month span, then, after taxes, ILEC bottom lines lost about \$325m in net income, and \$4.2bn in market capitalization, assuming a 13x P/E multiple. The Bells control about 94% of the nation's incumbent access lines, so the RBOCs, primarily through UNE, lost \$4bn in market capitalization in the last half of 2001. The Bells currently have a \$220bn equity market cap, meaning that CLECs conceivably destroyed 2% of Bell equity value in the H2 2001.
- ▶ CLEC penetration rising: By the end of 2001, according to the FCC, CLECs accounted for 10.2% of the nation's 192m switched lines, up from 7.7% 12 months earlier, a 32% increase in market share. Cable telephony lines are increasing at a slightly faster rate than overall CLEC lines. By the end of 2001, according to the FCC, cable telephone lines constituted 11% of CLEC lines (2.2m lines), and 1% of all switched lines.
- ▶ Some CLEC overbuilding: In H2 01, CLECs gained 2.4m lines, which we believe was created exclusively at the expense of the ILECs, or 19,000 lines per business day. Some of these lines are lost to cable telephony or where CLECs build their own connections directly to businesses. In such cases, the CLEC has overbuilt, or completely severed the connection between the ILEC and the customer, removing the ILEC from 100% of their former revenue stream.
- ▶ Ratings: We maintain our Hold ratings on BellSouth Corporation, SBC Communications and Verizon Communications.

PLEASE REFER TO THE TEXT AT THE END OF THIS REPORT FOR OUR DISCLAIMER AND ALL RELEVANT DISCLOSURES. IN RESPECT OF ANY COMPENDIUM REPORT COVERING SIX OR MORE COMPANIES, ALL RELEVANT DISCLOSURES ARE AVAILABLE ON OUR WEBSITE <a href="http://www.drkwresegrch.com">www.drkwresegrch.com</a> OR BY CONTACTING DRKW RESEARCH DEPARTMENT, 20 FENCHURCH STREET, LONDON, EC3P 3DB.

Online research: <a href="http://www.drkwresearch.com">www.drkwresearch.com</a> Bloomberg: DRKW<GO>

Hold

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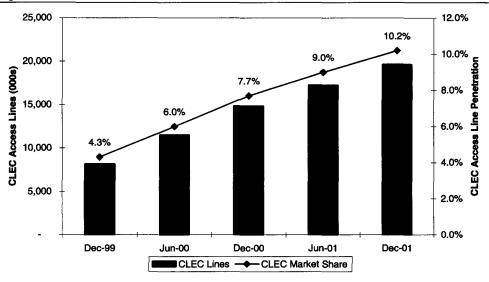


# **Background**

## 1-2 local competition punch

### Residential overbuild emerges concurrently with explosion in **UNE-P**

Figure 1: CLEC access lines, 1999-2001



Source: FCC

## Year-end 2001E CLEC line composition

Overbuild: 33%

23 July 2002

The goal of the 1996 Act was to create the environment for local competition, not create local competition We believe this is a telling statistic and perhaps the most important in this report. Our view is that the current rules forcing RBOCs to resell local lines to CLECs at very deep discounts are off course. The goal of the 1996 Act was to create the environment for local competition, not create local competition. Although seemingly subtle, this is a huge distinction. The idea is that to produce new, exciting services and pricing programs requires a competitor to provide new, exciting services. How can that occur if the CLEC is reselling the RBOCs' service? With only a 33% overbuilding rate, the desired outcome of the Act is unaccomplished. The idea was to give the CLECs a means to build customer scale upon which they could then justify building their own network, since this is an industry of scale. In point of fact, the growth in resale (UNE resale) is accelerating, despite the fact that the base of CLEC customers is also expanding. With UNE, the CLECs are merely behaving as rational decision makers. If it's cheaper and less risky to resell rather than build, then resell is the answer. Unlike the long distance industry, which is less of a natural monopoly since it takes just several billion dollars and two to three years to build a national network, except for the cream of the business market and the cream, i.e., demographically desirable (read:



Source: FCC

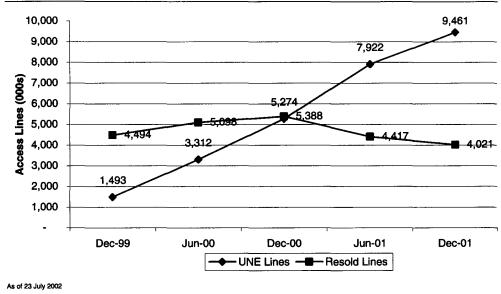
rich homeowners who can buy many services) residential market, a new national local network is unlikely to emerge. We won't get into "what ifs," but under a more rational local competitive framework, overbuilding might have occurred to a greater extent.

### Resale: 22%, down from 43% two years earlier

UNE-P lines add 20%-40% Resale is uneconomical for CLECs, so they are dropping resale lines or changing them to a UNE-P "lines" regime, which are functionally equivalent, but add 20%-40% points CLEC of gross margin to a CLEC.

points of gross margin to a





### UNE: 47% (24% at YE 1999) - erased 2% of bell equity?

According to FCC statistics, there were some 9.5m UNE loops at year-end 2001, up from 8m six months earlier. About 61%, or 5.8m lines, were UNE-P lines that included switching, and the rest (3.7m) were UNE loops, where the CLEC just leases the copper loop, and provides the other network elements. UNE-Loops cause the largest revenue loss under the local wholesale scheme. However, UNE loop sales should ameliorate, in our view.

ILECs tost 1.5m lines in the last six months of 2001 in the form of UNEs to CLECs, which we estimate comes to \$1bn in lost annualized sales, most of which is pure profit. In a six-month span, then, after taxes, ILEC bottom lines lost about \$325m in net income, and \$4.2bn in market capitalization, assuming a 13x P/E multiple. The Bells control about 94% of the nation's incumbent access lines, so the RBOCs, primarily through UNE, lost \$4bn in market capitalization in the last half of 2001. The Bells currently have a \$220bn equity market cap, meaning that CLECs conceivably destroyed 2% of Bell equity value in the second half of 2001, assuming our estimates are reasonable and that the market actually "made" this observation and factored it into stock prices. There's no assurance RBOC stocks didn't decline due to other reasons, and that the UNE-P issue has yet to be factored into the stocks.



# "The cream skim" – business, population density and demographics

The current competitive policies favor rich residential customers, large businesses and states with greater population density.

45% of CLEC lines served residential and small business markets

According to the FCC, 55% of CLEC lines served medium and large businesses and government customers. In contrast, just 23% of ILEC lines served such customers. Conversely, 45% of CLEC lines served residential and small business markets, while over 75% of Bell lines served lower profit residential and small business lines. Businesses and government offices are more densely packed, and spend more per access line than residents.

Thus, the ILECs are left holding the 'bag' – serving more of the costly (read: geographically dispersed) and lower paying line base. We view the 'cream skim' as one of the most compelling arguments that local competition regulation is destructive and illogical.

### "The overbuild" – sinking the sunk costs

Overbuilding erases any revenue contribution from former customers or prospective customers that would have used a Bell if an overbuilding CLEC wasn't around. It fully 'strands' the lines' assets. The business base is easier to overbuild because they are located in office buildings and otherwise packed more densely. So the 'cream skim' has been accompanied by the 'overbuild.' That is, for years, CLECs such as Time Warner Communications, AT&T Business and WorldCom's MFS (although we believe one of WCOM's downfall was its inability to leverage the MCI long distance base and 'backsell' an MFS local product into it) have been building their own trunks into business locations, either fully bypassing the ILEC, or perhaps renting minimal network subsegments such as the last link into a building. Now, cable telephony is copying the CLECs on the residential side. By piggybacking onto the cable television network, they found an economical way to overbuild the less dense residential base, a danger to the Bells that have concerned us for some time. FCC statistics show cable telephony penetration increasing even faster than overall CLEC penetration, and AT&T Broadband reported in Q2 02 that, for the first time, its cable telephony operations are EBITDA-positive, validation that a means to 'crack' the natural monopoly in the local residential market exists.

The bottom line is that competition comes in two flavors: reselling the RBOCs' network, or overbuilding. The Bells argue that low UNE rates, which can force an RBOC to resell a local line to a CLEC such as MCI "Neighborhood" for as much as 70% off of retail, aren't so bad because they at least provide some revenue across a high fixed cost structure. Also, since the line is deployed already (sunk cost), and only minimal cash is required to operate that line, an RBOC would select UNE to overbuilding as the lesser of two evils. We agree. However, with overbuilding now taking place in the business and residential ends of the local market, we expect that the value of the RBOCs' plant, i.e., their sunk costs, are falling, and that plant write downs loom.



From a macroeconomic point of view there are several concerns with the UNE-P system:

- lt's a policy-stimulated transfer of wealth (from shareholders and employees to consumers), rather than being left to market forces.
- ► In the longer-term it could rob consumers of advanced services that require the RBOCs' plentiful cash flow to fund.
- Asset writedowns will cause 'stock-shock' and a shock to the telecom 'supplier' system.

# UNE-P penetrating the residential and small business market

UNE-P has made it possible for AT&T and MCI to compete in the residential arena The UNE platform is growing rapidly in use. To the CLEC the only difference between reselling and UNEs is the cost. In fact, UNE is nothing more than resale with 2-3x the discount, which comes to a 35%-60% discount. UNE-P has made it possible for AT&T and MCI to compete in the residential arena. Because it is too costly to build out less dense residential networks, UNE-P resale (and cable telephony overbuilding) are being used to penetrate the residential and small business market. According to the FCC, CLECs served 4.6% of those markets at the end of 2000, and 6.6% of such markets by year-end 2001.

UNE is a creation of the prior FCC administration. Only network elements such as switching, local loop costs and other various network elements were required under the 1996 Act to be sold at reasonable discounts to the CLEC. The FCC decided that the ILECs were required to "rebundle" these elements and sell them at much steeper discounts than plain resale. Plain resale was required by the Act as well. The price was to be the retail price charged by the Bell less avoidable costs such as selling costs. That was interpreted to mean a 20%-25% discount to retail. However, the CLECs didn't have any margin left over for a profit. We're not sure, however, that profit was required by the Act. At the end of the day, the spirit of the Act was to deliver a mechanism to jumpstart local competition, and we interpret that to mean to develop a mechanism to allow competitors to build up a large enough base of customers – either through UNE elements or resale to THEN justify building their own network.

### Case study: AT&T UNEs

AT&T's new senior management states that the UNE-P platform is expected to be as successful in penetrating the business market as it has been in the residential market. Today, T has some 3.2m local lines, of which 500,000, or 15%, are UNE-P-based. That percentage will increase. We estimate that the UNE-P platform will be instrumental in enabling AT&T to reach its goal of \$10bn in annual business local revenues in five years. Note: it takes T about two years for UNE-P, on its own, to breakeven, excluding the positive impacts of bundling long distance with UNE-P.



Regulators have moved to an active stance to redesign the industry

## Regulators hurting consumers in long run

The combination of very effective lobbying on the part of small and large (read: AT&T) CLECs, and a democratic FCC (thought to be friendly to long distance and CLECs, not RBOCs) prodded the FCC to create the UNE-Platform, or UNE-P. The FCC decided that UNEs should be priced at a theoretical level, that is, what would it cost for a brand new local network to add an access line. The assumptions include state-of-the-art networks throughout, and perfect capital and man-hour deployments. In other words, we believe these are imaginary, non-historic; therefore, in our opinion, this is an unreasonable way to regulate an industry. Another related issue is that of regulation altogether. In the 10 years of covering this industry, regulators have, in our view, taken an exponentially more involved role in the "day-to-day" decisions about pricing, mergers, service offerings, inter-carrier relationships, etc. than before the 1996 Act. It wasn't supposed to turn out that way. Regulators have moved to an active stance to redesign the industry, from a passive stance where carriers knew the rules and operated freely within them. They knew what their returns would be, and didn't have to make the very risky types of investments RBOCs have made in the past few years to compensate for the loss of growth in the core business that has destroyed shareholder value. On top of that the regulators have had the nerve to regulate the newer high-risk capital return projects such as DSL. Now every carrier move is scrutinized by a state or FCC hearing, slowing down the communications revolution of the late 1990s. In the short run, the consumer wins with these artificially lowered local rates. In the long term, the consumer will suffer as ILECs cut their capital budgets by 30%, which will produce fewer services, more network outages, and crummier customer service. The regulators don't understand that the local industry, unlike the long distance industry, is the closest thing in telecoms to a "natural" monopoly. Wireless, long distance and undersea networks cost less per DS-0 to build, and are constructed in a matter of months or a year or two, not the many years it takes to build a local landline network.

End result \$1.2bn decline over last year

Revenues (\$000s)	Q1 01	Q2 01	Q3 01	Q4 01	Q1 02	Q2 Q2
VZ	10,920	10,953	10,666	10,539	10,474	10,468
YoY growth	2.9%	0.3%	-1.9%	-3.6%	-4.1%	-4.4%
SBC	10,113	10,334	10,201	10,043	9,781	9,737
YoY growth	5.0%	3.6%	1.0%	-1.5%	-3.3%	-5.8%
BLS	4,612	4,722	4,733	4,757	4,614	4,586
YoY growth	3.0%	3.6%	4.6%	4.4%	0.0%	-2.9%
Total	25,645	26,009	25,600	25,339	24,869	24,791
YoY growth	3.7%	2.2%	0.4%	-1.3%	-3.0%	-4.7%
RBOC Local Revenues	25,645	26,009	25,600	25,339	24,869	24,791
Note: Qwest does not break out local results						

Source: Verizon, SBC Communications, BellSouth



# Regulators forgot to notice that wireless is local competition, too

In its July 2002 Local Telephone Competition report, the FCC reported that US wireless subscribers increased from 79.7m at year-end 1999 to 122.4m by year-end 2001, or a 23.9% CAGR. With wireless carriers offering big bucket minute plans including features like Caller ID and free roaming, wireless phones are replacing landlines for many consumers. As wireless companies continue to build out their networks and improve service quality, wireless displacement will increasingly displace RBOC landlines.

Wireless displacement is not only affecting primary access lines, but is having a devastating effect on RBOC second lines Wireless displacement is not only affecting primary access lines, but is having a devastating effect on RBOC second lines. Second line growth for the RBOCs is declining rapidly, primarily as a result of wireless displacement of these second lines. For example, BLS reported a Q2 02 second line YoY growth decline of 10.6%, while SBC's second lines declined 8.7% YoY in Q2 02. Historically, second lines have increased as much as 15%-20% YoY, and just two quarters ago we estimate that these second line were declining approximately 5%. If we estimate that the RBOCs combined for 17m second lines at year-end 2001, and each second line generates \$5 per month with a 65% EBITDA margin, then \$633m of EBITDA was generated from RBOC second lines in 2001. This \$633m of EBITDA is in danger of being reduced\_by 10% per year, primarily due to wireless displacement.

			Price	Target												Est. 5-yr	Ind		Mkt
			(US\$)	price	Fiscal	52-w	<u>eek (US\$)</u>	<u>Earni</u>	ngs per sh	are (US\$)	Qtrly.	EPS (US\$)		P/E	ratio (x)	gr. rate	div	Yield	cap.
Rating	Company	Symbol	8 August	(US\$)	year	High	Low	2001A	2002E	2003E	Yr. ago	Curr. est.	2001A	2002E	2003É	(%)	(US\$)	(%)	(US\$m)
Hold	BellSouth Corp.	BLS	\$24.60	\$28.00	Dec	\$42.95	\$20.10	\$2.21	\$2.15	\$2.23	\$0.59	\$0.53	11.1x	11.4x	11.0x	NA	\$0.80	3.3%	\$46,076
Hold	SBC Communications (1)	SBC	\$26.63	\$28.00	Dec	\$47.50	\$22.20	\$2.35	\$2.31	\$2.41	\$0.59	\$0.55	11.3x	11.5x	11.0x	NA	\$1.08	4.1%	\$88,949
Hold	Verizon Communications (1)	٧Z	\$29.70	\$38.00	Dec	\$55.99	\$26.01	\$3.00	\$3.06	\$3.15	\$0.75	\$0.78	9.9x	9.7x	9.4x	NA	\$1.54	5.2%	\$80,874

(1) Mr. Roberts has a long position in the common shares of this security.

Source: First Call, Reuters, DrKW estimates





# Notes

## Telecommunications & Broadband Services

### Regulatory Update

Type of Report
INDUSTRY REPORT

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August 22, 2002

# THE STATUS OF 271 AND UNE-PLATFORM IN THE REGIONAL BELLS' TERRITORIES

- Since our May report, the FCC has granted 271s in four states: Georgia and Louisiana for BellSouth and Maine and New Jersey for Verizon. Applications for seventeen states' 271s are before the FCC now. By year-end we expect all of Verizon to be covered by 271s. We expect Qwest to have 271s in all but one or two states (Minnesota and Arizona being the ones we expect to lag). We expect BellSouth to have all its 271s except Florida. Finally, we expect SBC to add California late in 2002, but do not believe the Ameritech states will get their 271s until the first half of 2003.
- As part of the 271 process, UNE rates since May have been reduced in many states, most notably in the Qwest Region, but also in SBC and BellSouth states. We expect some more UNE reductions (Massachusetts, New Jersey and Pennsylvania are pending for Verizon, for example) but expect the pace to slow given how much UNE rates have decreased and given that the 271 process that drives some of the cuts is nearing its end.
- For the CLECs, the lower UNE rates present the opportunity to enter the local market with minimal up-front investment. It is not clear, however, whether some of the more troubled companies, like WorldCom, will be able to take full advantage. We view UNEP as being positive for the IXCs, particularly AT&T, but do not believe that it is enough to stem the declining revenues and profitability of the consumer long-distance market.
- From the RBOC-investor's perspective, UNEP presents several problems. One is the reduction in revenues that comes from converting retail to wholesale revenues. The other is the pricing compression that comes from the RBOCs' own attempts to restructure their prices to compete with the new entrants. Finally, there is the exposure during a period when an RBOC cannot yet enter long-distance, but the IXCs have begun to enter its local market. Among the RBOCs, SBC is by far the most exposed. In California and in the Ameritech states, it has super-low UNEP prices and no ability to counter an IXC's entry with an all-distance plan. It is possible that Verizon will also see some meaningful share loss in the next few months, but we do not see the IXCs being as focused on it as they are on SBC, particularly in California.

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### Ratings

Strong Buy
Outperform market near-term and long-term by over 10%

Market Outperform

over 10%

Outperform market long-term by

Market Perform

Market Underperform

Perform in-line with market (+ or -5%)

Underperform market by over 10%



## THE STATUS OF 271 AND UNE-PLATFORM IN THE REGIONAL BELLS' TERRITORIES

Over three months have passed since we last published our report "The Status of 271 and UNE-Platform in the Regional Bells' Territories". Given the recent flood of 271 filings with the FCC and the concomitant changes to UNE-Platform (UNEP) rates made by individual state commissions, we thought it timely to provide an update.

- The flood of applications for in-Region long distance entry under section 271 of the Telecom Act (271) is reaching its crest. Fourteen 271s have been granted to the Regional Bells (RBOCs) so far, and the FCC has applications for seventeen more before it right now: Alabama, entucky, Mississippi, North Carolina and South Carolina for BellSouth; Colorado, Idaho, Iowa, Nebraska, North Dakota, Montana, Utah, Washington, and Wyoming for Qwest; New Hampshire, Delaware, and Virginia for Verizon.
- By year-end 2002, we expect 271s to cover all BellSouth states except Florida, all Qwest states except Minnesota and possibly Arizona, and all Verizon states. SBC has a good chance of having California granted by year-end, and a slight chance of having Michigan granted as well, with the rest of the Ameritech states likely to slip into the first half of 2003.
- As the RBOCs have prepared to submit their 271s, they and their state commissions have made changes to their unbundled network element (UNE) prices. While commissions do occasionally change UNE prices independently of the 271 process—as New York did earlier this year and as Massachusetts, New Jersey, Texas and Pennsylvania are doing now—most changes have been made as part of the 271 process. Thus, both because UNE rates have been lowered sharply in most states over the last year and because the 271 process is ending, we expect a slower rate of change to UNE prices over the next year or two than we have seen in the last few months.
- The actual implementation of UNEP accelerated in the last few months, as competitive carriers (CLECs) have focused more on this market. WorldCom's MCI division, in partnership with Z-Tel launched its Neighborhood Plan in April. AT&T has added local UNEP-based service in six states to its original two since March of 2002 and will probably add another two states this year. In early 2002, AT&T was offering UNEP-based local service only in New York and Texas. Since March, it has added Michigan, Georgia, Illinois, Ohio, California, and New Jersey. It has indicated that it will also enter Pennsylvania and Massachusetts this year. We expect it to push hard in California, where it will fight hardest to protect its long-distance market. WorldCom's MCI division introduced its Neighborhood plan in April and appeared ready to pursue entry in at least the urban zones throughout most of the country. Entry by these long-distance carriers (IXCs) has been partly in response to potential entry by the RBOCs into the long distance market in a given state and partly in response to lower UNE prices. Given the financial problems at WorldCom and the changes in AT&T's structure and management as it merges its Broadband

unit with Comcast it is somewhat difficult to predict how hard they will push UNEP. We expect some backing off on WorldCom's part, and a harder push in a small number of states on AT&T's.

- At least in theory, the greatest exposure to changes in UNE prices is to SBC. AT&T just began deploying UNEP in California, where SBC will not be able to respond on the long-distance side till around year-end 2002, at best. AT&T is also in Michigan, Illinois, and Ohio, where it is unlikely that SBC will be able to respond on the long-distance side till sometime in the first half of 2003. As we indicate below, UNEP discounts are greatest overall in the SBC Region. BellSouth is seeing UNEP-based entry primarily in Georgia and Florida, but AT&T has not yet entered Florida. Florida is the only state in which we do not expect BellSouth to have a 271 till late first quarter 2003. Qwest's rates have recently dropped in a number of states, so that the Regional average UNEP rate has dropped from \$28.21 to \$23.97. However, we do not believe that entry into Qwest's territory is a high priority for the IXCs at any price. Verizon's rate at \$20.23 is the second lowest on a Regional basis, but that rate is relatively stable vs. May of 2002. It is also worth noting that Verizon has not lost much market share since rates in New York were lowered in January. AT&T has indicated that it will enter Pennsylvania and Massachusetts this year, but neither the timing nor the level of effort in those states is clear to us.
- The Supreme Court has affirmed the FCC's right to designate TELRIC (Total Element Long Run Incremental Cost) as the methodology by which UNE prices are set. More broadly, in its May 2002 Verizon Communications v. FCC decision, the Supreme Court appeared to affirm the FCC's right to designate any method other than rate-of-return, which is specifically precluded by the Telecom Act, for the purpose of setting UNE prices.
- The long-term survival of UNEP is, nevertheless, in question. In its May 2002 Verizon decision, the Supreme Court reaffirmed the "necessary and impair" standard, which it had already highlighted in its January 1999 Iowa Utilities Board v. FCC decision. On May 24th, in its USTA v. FCC decision, the D.C. Circuit of Appeals remanded to the FCC the 1999 UNE order in which the FCC attempted to refine the list of required UNEs in accordance with the Supreme Court's "necessary and impair" standard. The D.C. Circuit also vacated the FCC's line-sharing order. The FCC has appealed back to the full D.C. Circuit some aspects of the court's decision.
- All of these judicial decisions will have an impact on the triennial review which was initiated by the FCC in December of 2001 to decide which UNEs still meet the "necessary and impair" test. The triennial review was expected to conclude this year. If the D.C. Circuit does accept the FCC's appeal, we believe it is unlikely that the FCC will issue an order in the triennial review till after the court rules, most likely some time next spring. Aside from delaying the conclusion, the various court decisions are likely to drive the FCC toward a more granular analysis than it had done in the past. That was the bent of the current FCC anyway, but the D.C. decision reinforces it. For example, we would not be surprised to see switching removed as an element in some

markets fairly quickly and in others over some longer transition period. Other elements also might be removed over time in some geographic and customer markets. If the FCC decides to take granularity down to the wire-center level, it may leave actual implementation in the hands of the states, but with fairly tight rules to guide that implementation. In the context of UNEP, what is significant about the removal of an individual element is that it makes it necessary for the CLEC to do some work to reassemble the line when it inserts its own equipment. That will make it more difficult to move large numbers of customers rapidly. Thus, the timing and outcome of the triennial review is very important both to the CLECs/IXCs who use UNEP and to the RBOCs who are wholesaling lines to those CLECs/IXCs at deep discounts.

- The actual financial impact of UNEP on either the RBOCs or their competitors is, of course, what investors care about. Unfortunately, it is difficult to quantify because it depends so much on the companies' strategies. The more CLECs are able to cream-skim in a given market, the better their own margins and the greater the damage to the RBOC. The CLECs' ability to cream-skim, in turn, depends not only on the CLECs' own strategies, but on the RBOCs' win-back efforts, which often include the introduction of new pricing plans and the RBOCs' ability to offer all-distance plans. Thus, damage to the RBOCs' financials comes not only from the conversion of retail revenues to wholesale revenues, but from a broader repricing in response to competition. The offset from long distance appears to be fairly minor, at this point. Although ultimately all-distance customers may be "stickier" than those who use only one service, initially both sides are likely to spend more on marketing to fight churn than they did before.
- Our May 1, 2002 report included one effort at such an analysis. It found that UNEP creates a discount of about 19% to 42% below retail residential revenue. Using the same retail rates, those discounts would now range from 24% to Another way to look at the issue is to use the FCC's rate reference 50%. book, which relies, in turn, on TNS bill-harvesting data. According to this data, average residential spending per household on local service is \$426 per year and on long-distance \$176 per year. Assuming 1.2 lines per household, that would equate to about \$30 per line in local revenue plus about \$4 per line in access charges for a total revenue per line of about \$33-\$34. That figure falls within the range of \$30-\$34 for retail consumer revenue that we had estimated in May, although both calculations present potential problems. For the TNS data, specifically, it is not clear whether taxes and Universal Service Fund contributions which an RBOC would simply pass through to the government are included in the revenue. With that caveat, we are using \$33.50 as a national average residential rate. That leads to UNEP discounts on a Region-wide basis of 27% in BellSouth, 28% in Qwest, 48% in SBC, and 40% in Verizon. The TNS numbers also indicate that the RBOC would need to gain more than three long-distance customers to make up for the revenues from any local customer it loses (\$474 of local plus access revenue vs. \$128 of longdistance revenue net of access). And-given the different margin structures of the industries—it needs more than that to make up for the lost cash flow. Of course, to the extent that an IXC can capture small business customers whose



retail spending is higher than that of consumers, the damage to the RBOC is greater. For some time, at least, while the industry restructures itself into an "all distance" market, the UNEP vs. 271 game is likely to be "negative-sum," with both the RBOCs' and IXCs' profits hurt by lower revenue and higher marketing costs.

### **APPENDIX**

SUMMARY OF CHANGES TO UNEP REPORT, MAY TO AUGUST, 2002

Changes in methodology and corrections of errors:

- We changed our MOU (minutes of use) assumption from 1200 to 1411, to account for toll minutes, based on footnote 252 of the FCC's Pennsylvania order.
- For the columns that calculate full UNEP based on DEM (dial-equipment minutes), there is no change. Thus, for comparison, we are showing full UNEP based on DEM for both May and August in our tables.
- We corrected an error in the formula that calculated amortized non-recurring charges for Verizon's MA, NH, NY, DE, PA. For NV, S, MO, O and TX, we now have some non-recurring charges that we did not have in our last iteration. For Maryland, we are no longer using the compliance rates that we used in May. Statewide loop rate averages changed in several BellSouth, Qwest and Verizon states, though the actual rates did not, based on new estimates of the distributions of lines per zone: Y, LA, MS, SC, NM, ME, RI, PA.
- Once we assemble our data, we ask all the relevant state commissions, RBOCs and the two major IXCs to comment on its accuracy. We received specific feedback on the accuracy of our tables from all the RBOCs and many states.

### SUMMARY OF RBOC CHANGES

- UNE prices continue to trend down.
- For all RBOCs the full UNEP average (assuming DEM) dropped by 10% from that which we reported in May.
- On a national basis, full UNEP average (assuming DEM) now stands at \$20.28 vs. the \$22.58 average we reported in May.
- The range is a high of \$24.38 for BellSouth and a low of \$17.50 for SBC, within the range we predicted in our May report.
- SBC experienced a roughly 20% decline (with an even sharper decline in California) and Qwest experienced a roughly 15% decline in full UNEP (DEM) average since our May report.
- The RBOC-wide total switching and transport average dropped 21%, from the \$8.34 we reported in May to \$6.59 in August.
- Several states' full UNEP (DEM) price appear to increase or actually increased from that which we reported in May. In some cases, as noted above, we changed the non-recurring formula. In some cases we changed the distribution



of loops among zones, thus changing the average. In a few cases, rates actually rose. In AL, FL, LA, MS and SC, there is now a cross-connect charge that is part of the non-recurring charges that we amortize. In Oregon, the port rate increased slightly.

— Anna Maria ovacs, Ph.D., CFA
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— Gregory S. Vitale

## COMPANIES MENTIONED IN THIS REPORT

Company Name	Symbol	<u>Price</u>
BellSouth	BLS	\$25.44
SBC	SBC	\$27.89
Qwest	Q	\$2.82
Verizon	VZ	\$31.18
AT&T	T	\$11.79
WorldCom's MCI	WCOEQ	\$0.12
Z-Tel	ZTEL	\$1.44
Comcast	CMCS	\$22.99
Dow Jones Industrial	DJIA	8,887.87
S&P 500 Stock Index	SPX	941.06

BOC Regionwide Averages		ACCESS LINES (000s)	% OF TOTAL ACCESS LINES	LOOP RATE (per month)	TRANSPORT (per month) Assumes 1411	(per month)  Assumes DEM	ALL OTHER (per month) Assumes 1411	ALL OTHER (per month)	FULL UNEP ORIGINATING AND TERMINATING Assumes 1411	FULL UNEP ORIGINATING AND TERMINATING Assumes DEM	TERMINATING Assumes DEM
			1		originating minutes	minutes	originating minutes	minutes	originating minutes	minutes	minutes
				EY INPUTS		SUBTOT				TOTALS	
verage, All RBOCS		145,078	100%	\$13.04	\$7.28	\$6.59	\$0.62	\$0.66	\$20.94	\$20.28	\$22.58
	High			\$16.60	\$8.42	\$6.97	\$1.61	\$2.01	\$24.58	\$24.38	\$28.21
	RBOC Low			Q \$11.03	<u>VZ</u> \$5.92	Q \$5.91	<u>BLS</u> \$0.19	BLS \$0.18	<u>Q</u> \$18.30	<u>BLS</u> \$17.50	<u>Q</u> \$19.81
	RBOC			SBC	BLS	SBC	VZ	VZ	\$BC	SBC	\$19.61 VZ
ellSouth Regionwide Avg.		24,052	17%	\$15.42	\$5.92	\$6.95	\$1.61	\$2.01	\$22.94	\$24.38	\$26.06
	High			\$22.37	\$6.78	\$8.77	\$2.63	\$3.11	\$29.34	\$29.82	\$36.09
	State			MS	NC	GA	FL	FL	MS	MS	AL
	Low			\$12.55	\$4.30	\$5.31	\$0.99	\$1.18	\$19.48	\$20.88	\$20.90
	State			GA	TN	TN	Υ	MS	TN	TN	TN
vest Regionwide Avg.		17,961	12%	\$16.60	\$7.55	\$6.97	\$0.43	\$0.40	\$24.58	\$23.97	\$28.21
	High			\$23.98	\$12.22	\$10.25	\$0.75	\$0.70	\$34.95	\$34.64	\$39.98
	State			MT.	SD	SD	<u>OR</u>	QR	MI	MI	MI
	Low			\$13.43	\$5.13	\$4.44	\$0.18	\$0.18	\$20.65	\$20.54	\$22.17
<del></del>	State			UT	NM	NM NM	IA	1A	UT	UT	OR
C Regionwide Avg.		58,138	40%	\$11.03	\$6.67	\$5.91	\$0.60	\$0.55	\$18.30	\$17.50	\$21.54
	High			\$20.52	\$13.24	\$10.13	\$2.90	\$2.82	\$33.84	\$30.63	\$30.54
	State			NV 22.01	NV	<u>WI</u>	WI 20.00	WI 20.00	NV	NV	NY
	Low State			\$7.01 OH	\$3.85	\$3.71	\$0.03	\$0.02	\$12.20	\$12.05 IN	\$14.50
AMERITECH Reg		21,841	38%	\$9.21	IN	IN \$5.94	IN \$0.65	IN \$0.58	IN \$16.28	\$15.73	M1 \$16.32
AMERICE REE	High		3076	\$10.90	\$11.27	\$10.13	\$2.90	\$2.82	\$25.07	\$23.85	\$23.85
	State			<u>WI</u>	W1	WI	32.90 WI	32.82 WI	WI	<u>wi</u>	<u>W[</u>
	Low			\$7.01	\$3.85	\$3.71	\$0.03	\$0.02	\$12.20	\$12.05	\$14.50
	State			ОН	IN	IN	IN	IN	IN	iN	MI
PACIFIC BELL Reg		19,001	33%	\$10.15	\$6.90	\$5.54	\$0.08	\$0.08	\$17.13	\$15.77	\$27.54
	High			\$20.52	\$13.24	\$10.02	\$0.08	\$0.08	\$33.84	\$30.63	\$30.54
	State			NV	NY	NY	CA. NV	CA. NV	NV	NV	NV
	Low			\$9.93	\$6.77	\$5.44	\$0.08	\$0.08	\$16.78	\$15.46	\$27.47
	State			CA	CA	CA	CA, NV	CA, NV	CA	CA	CA
SWBT Reg	gion Avg.	17,296	30%	\$14.31	\$6.73	\$6.29	\$1.10	\$1.02	\$22.14	\$21.63	\$21.54
	High			\$15.71	\$8.45	\$8.03	\$1.37	\$1.30	\$25.53	\$25.03	\$24.88
	State			0	<u>o_</u>	<u>O</u>	<b>Q</b>	<u>o_</u>	Q	<u>o_</u>	<u>o_</u>
	Low			\$13.09	\$5.75	<b>\$</b> 5.16	\$0.27	\$0.27	\$20.13	\$19.60	\$19.49
	State		2404	AR	AR, S	<u>s</u>	MO	MO	AR	<u>S</u>	S
tizon Regionwide Avg.		44,927	31%	\$12.93	\$8.69	\$7.12	50.19	\$0.18	S21.82	\$20.23	\$19.81
	High			\$24.58	\$20.82	\$19.32	\$0.69	\$0.66	\$45.52	\$44.02	\$44.02
	State Low			<u>WV</u> \$9.52	<u>WV</u> \$6.41	<u>₩V</u> \$5.25	<u>DE</u> \$0.00	<u>DE</u> \$0.00	<u>WV</u> \$17.15	<u>₩V</u> \$15.14	<u>WV</u> \$15.14
	State			\$9.52 NJ	36.41 NY	\$5.25 PA	\$0.00 DC	30.00 DC	\$17.15 NJ	315.14 NJ	315.14 NJ
NYNEX Reg		19,487	43%	\$12.92	\$8.13	\$6.82	\$0.13	\$0.12	\$21.18	\$19.85	\$20.36
i i i i i i i i i i i i i i i i i i i	High			\$18.10	\$12.91	\$10.54	\$0.46	\$0.38	\$28.08	\$25.42	\$29.77
	State			NH	MA	YI.	NH	NH	MA	MA	NH
	Low			\$11.49	\$6.41	\$5.59	\$0.04	\$0.03	\$17.98	\$17.17	\$17.35
	State			NY	NY	NY	RI,VT	RI,VT	NY	NY	NY
BELL ATLANTIC Reg			57%	\$12.95	\$9.11	\$7.35	\$0.24	\$0.22	\$22.31	\$20.52	\$19.39
`	High			\$24.58	\$20.82	\$19.32	\$0.69	\$0.66	\$45.52	\$44.02	\$44.02
	State			<b>W.</b> Y	<u>wv</u>	<u>wv</u>	DE	DE	<u>wv</u>	<u>wv</u>	<u>wv</u>
	Low			\$9.52	\$6.49	\$5.25	\$0.00	\$0.00	\$17.15	\$15.14	\$15.14
	State	<u> </u>		NJ	PA	PA	DC	DC	NJ NJ	NJ	NJ NJ

EXHIBIT 1A: UNBUNDLED NETWOR ELEMENT RATE COMPARISON MATRIX SUMMARY - ALL RBOCS

RBOC Regionwide Averages	LOOP RATE (per month)	PORT RATE (per month)	Local originating SWITCHING (per MOU)	Local terminating SWITCHING (per MOU)	OTHER SWITCHING AND TRANSPORT (per MOU)	DUF (per month)	DUF (per month)	Other Switching and Transport (per month)	Other Switching and Transport (per month)	FEATURE COST (per month)	AMORTIZED NRC (per month)	TOTAL DEM (per line, per month)
						Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes			_
·			EY INPUTS						TOTALS			
Average, All RBOCS	\$13.04	\$2.02	\$0,001663	\$0.001547	\$0.000675	\$0.45	\$0.48	\$0.95	\$0.82	\$0.33	\$0.17	2,171
High	\$16.60	\$2.49	\$0.002388	\$0.002199	\$0.001036	\$1.46	\$1.86	\$1.46	\$1.32	\$0.61	\$0.23	3,168
<u>RBOC</u> Low	Q \$11.03	SBC	<u>VZ</u> \$0.001150	<u>VZ</u>	Q	BLS	BLS	Q	Q	BLS	SBC	BLS
RBOC		\$1.41 O	\$0.001150 SBC	\$0.001150 SBC	\$0.000517 BLS	\$0.06 VZ	\$0.05 VZ	\$0.73	\$0.56 VZ	\$0.20 VZ	\$0.13	1,871
SellSouth Regionwide Avg.	\$15.42	\$1.73	S0.001151	\$0.001151	\$0.000517	\$1.46	\$1.86	BLS \$0.73	\$0.93	\$0.61	Q, VZ \$0.14	VZ 3,168
High	\$22.37	\$2.80	\$0.001868	\$0.001868	\$0,000782	\$2.45	\$2.94	\$1.10	\$1.46	\$2.26	\$0.22	3,574
State	MS	<u>sc</u>	LA	LA	_ <u>_Y</u>	EL	EL	_ <u>_Y</u>	_ <u>Y</u>	FL	NC	<u>GA</u>
Low	\$12.55	\$1.15	\$0,000703	\$0.000703	\$0.000408	\$0.88	\$1.03	\$0.58	\$0.80	\$0.00	\$0.06	2,754
State	GA	Y	AL	AL	AL	NC	MS	AL	AL	ALGA, Y,LA,	Y	MS
)west Regionwide Avg.	\$16.60	\$1.41	\$0.001731	\$0.001731	\$0,001036	\$0.30	\$0.28	\$1.46	\$1.32	\$0.40	\$0.13	2,229
High	\$23.98	\$2.64	\$0.003469	\$0.003469	\$0.001301	\$0.39	\$0.46	\$1.84	\$1.66	\$4.76	\$0.36	2,947
State	MT	WY	SD	SD	MN	MN,ND,OR,	ND	MN	MN	UT	OR	ND
Low	\$13.43	\$0.93	\$0.000000	\$0.000000	\$0.000721	\$0.00	\$0.00	\$1.02	\$0.83	\$0.00	\$0.00	2,001
State		UT	UT	UT	NM	IA .	<u>IA</u>	NM		CO,IA,ID,MN,	MN	SD
BC Regionwide Avg.	\$11.03	\$2.49	\$0.001150	\$0.001150	\$0.000746	\$0.36	\$0.32	\$1.05	\$0.81	\$0.29	\$0.23	1,974
High	\$20.52	\$6.25	\$0.002259	\$0.002259	\$0.005408	\$1.06	\$1.02	\$7,63	\$5.52	\$0.90	\$2.57	2,386
<u>State</u> Low	<u>NV</u> \$7.01	<u>W1</u> \$0.88	<u>Q</u>	<u>Q_</u>	<u>NV</u>	A . S.O .TX		NY	<u>NV</u>	CA	<u>WI</u>	AR
Low	37.01 OH	30.88 CA	\$0.000000 IL,IN	\$0.000000 IL, IN	\$0.000299 TX	\$0.00	\$0.00 CA,NV,MO	\$0.42 TX	\$0.38 TX	\$0.00	\$0.01 IN	1,764 IL
AMERITECH Region Avg.	\$9.21	\$4.20	\$0.000436	\$6.000436	\$0.000810	CA,NV,MO \$0.27	\$0.20	\$1.14	\$0.88	IL,IN,OH,MI,WI \$0.00	\$0.38	1,906
High	\$10.90	\$6.25	\$0.001319	\$0.001319	\$0.001247	\$0.33	\$0.27	\$1.76	\$1.36	n/a	\$2.57	2,097
State		W1	WI	WI	WI.	W1	OH	MT Alivo	MT	n/a	WI	OH.
Low	\$7.01	\$2.53	\$0.000000	\$0.000000	\$0.000548	\$0.02	\$0.01	\$0.77	\$0.58	n/a	\$0.01	1,764
State	ОН	MI	IL,IN	IL, IN	MI	IN	IN	MI	MI	n/a	IN	IL
PACIFIC BELL Region Avg.	\$10.15	\$0.90	\$0,001482	\$0.001482	\$0.001036	\$0.00	\$0.00	\$1.46	\$1.07	\$0.88	80.08	1,813
High	\$20.52	\$1.63	\$0.001610	\$0.001610	\$0.005408	n/a	n/a	\$7.63	\$5.52	\$0.90	\$0.08	1,814
State		<u>NV</u>	NV	NV	<u>NV</u>	n/a	<u>n/a</u>	NV	NV	CA	CA, NV	<u>CA</u>
Low	\$9.93	\$0.88	\$0.001480	\$0.001480	\$0.000944	n/a	n/a	\$1.33	\$0.98	\$0.00	80.08	1,786
State		CA	CA	CA	CA	n/a	n/a	CA	CA	NV	CA, NV	NV
SWBT Region Avg.	\$14.31	\$2.08	\$0,001688	\$0.001688	\$0,000345	\$0.89	\$9.81	\$0.49	\$0.44	\$0.00	\$0.21	2,237
High	\$15.71	\$2.22	\$0.002259	\$0.002259	\$0.000489	\$1.06	\$1.02	\$0.69	\$0.64	\$0.00	\$0.31	2,386
State	<u>O</u>	<u>TX</u>	<u>O</u>	<u>O</u> \$0.001490	<u>O</u>	AR. S.O .TX	<u>AR</u> \$0.00	<u>O</u>	<u>O</u> \$0.38	<u>n/a</u> \$0.00	<u>O</u> \$0.18	<u>AR</u>
Low State		\$1.61 AR, S	30.001490 AR, S	\$9.001490 AR, S	\$0.000299 TX	\$0.00 MO	30.00 MO	50.42 TX	30.38 TX	50.00 n/a	SU.IN TX	2,115 S
erizon Regionwide Avg.	\$12.93	\$1.79	\$0.002575	50.002199	\$0.000523	\$0.06	\$0.05	\$0.74	\$0.56	\$0.20	\$0.13	1,871
High		\$2.57	\$0.008868	\$0.005622	\$0.001540	\$0.43	\$0.35	\$2.17	\$1.65	\$1.36	\$0.56	2,277
State		NY	<u>wv</u>	WV	MA	NH	NH	MA	MA	MD	DE	wv
Low	\$9.52	\$0.71	\$0.001147	\$0.001111	\$0.000162	\$0.00	\$0.00	\$0.23	\$0.16	\$0.00	\$0.00	1,317
State		NH	NY	NY	VA	NY,DC	NY,DC_	VA	NJ	ME,MA,DC,DE,	RI,VT,DC	DC
NYNEX Region Avg.	\$13.05	\$2.24	\$0.001832	\$0.001804	\$0.000875	\$0.03	\$0.03	\$1.24	\$0.95	\$0.17	\$0.09	1,908
High	\$20.96	\$2.57	\$0.004003	\$0.004003	\$0.001540	\$0.43	\$0.35	\$2.17	\$1.65	\$0.32	\$0.15	2,009
State	<u>NH</u>	NY	<u>VT</u>	<u>vt</u>	MA	<u>NH</u>	NH	MA	<u>M</u> A	<u>RI</u>	MA	<u>VT</u>
Low	\$11.49	\$0.71	\$0.001147	\$0.001111	\$0.000578	\$0.00	\$0.00	\$0.82	\$0.63	\$0.00	\$0.00	1,870
State		NH	NY	NY	NY	NY_	NY	NY	NY	ME,MA	RI,VT	MA
BELL ATLANTIC Region Avg.	\$12.95	\$1.45	\$0.003144	\$0.002501	\$0.000253	\$0.09	\$0.06	S0.36	\$0.27	50.22	\$0.16	1,842
High		\$2.23	\$0.008868	\$0.005622	\$0.000696	\$0.13	\$0.12	\$0.98	\$0.70	\$1.36	\$0.56	2,277
State		DE	<u>w</u> v	<u>wv</u>	<u>DC</u>	<u>DE, WV</u>	<u>.wv</u>	<u>DC</u>	wy	MD	DE	<u>wv</u>
Low	\$9.52	\$0.73	\$0.001802	\$0.001615	\$0.000162	00.00	\$0.00	\$0.23	\$0.16	00.02	\$0.00	1,317
State	NJ	NJ	PA	PA	VA	DC	DC	VA.	NJ	DC,DE,NJ	DC,NJ,WV	DC

STATE	DENSITY ZONES	ACCESS LINES (000)	% of TOTAL ACCESS LINES	LOOP RATE (per month)	TOTAL SWITCHING AND TRANSPORT (per month)	TOTAL SWITCHING AND TRANSPORT (per month)	ALL OTHER (per month)	ALL OTHER (per month)	FULL UNEP ORIGINATING AND TERMINATING	FULL UNEP ORIGINATING AND TERMINATING	MAY 2002 FULL UNEP ORIGINATING AND TERMINATING
					Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes	Assumes DEM minutes
				EY INPUT		SUBTO	TALS			TOTALS	
\ labam a	Avg.	1,942	8%	\$16.66	\$4.55	\$5.46	\$1.07	\$1.43	\$22.28	\$23.55	\$36.09
	1			\$11.55							
	2			\$20.04							
	3			<b>\$</b> 33.65							
lorida	Avg.	6,514	27%	\$15.55	\$6.03	\$6.55	\$2.63	\$3.11	\$24.21	\$25.21	\$26.18
	ı			\$11.77							
	2			\$15.89						•	
	3			\$30.70						·- <del>-</del>	
eorgia	Avg.	4,115	17%	\$12.55	\$6.61	\$8.77	\$1.77	\$2.51	\$20.93	\$23.83	\$23.83
	l .			\$10.80							
	2			\$12.47							
<del></del>	3			\$19.83							
entacky	Avg.	1,232	5%	\$17.26	\$5.21	\$6.53	\$0.99	\$1.29	\$23.46	\$25.08	\$23.36
	1			\$9.64							
	2			\$14.37							
				\$30.59	4//2				000.01	007.07	
ouisiana	Avg.	2,351	10%	\$16.24	\$6.63	\$7.87	\$1.05	\$1.26	\$23.91	\$25.37	\$25.37
	1			\$11.77							
	2 3			\$22.39 \$48.26							
d ississippi		1,326	6%	\$22.37	\$5.90	\$6.28	\$1.07	\$1.18	\$29.34	\$29.82	\$29.01
a ississippi	Avg.	1,320	070		\$5.90	\$0.28	\$1.07	31.18	\$29.34	\$29.82	\$29.01
	2			\$10.98							
	3			\$15.91							
	4			\$25.04 \$43.68							
orth Carolina	Avg.	2,473	10%	\$14.18	\$6.78	\$7.64	\$1.10	\$1.27	\$22.06	\$23.09	\$27.00
WILE CEVONER	Avg.	2,473	1076	\$10.75	30.78	37.04	\$1.10	31.27	\$22.00	\$23,07	327.00
	2			\$19.05							
	3			\$30.33							
outh Carolina	Avg.	1,475	6%	\$16.51	\$6.15	\$6.81	\$1.08	\$1.26	\$23.74	\$24.58	\$26.93
outh Carollan	1	1,475	070	\$13.76	30.15	40.01	<b>3</b> 1.00	31.20	\$23.14	<b>\$24.50</b>	\$20.75
	2			\$20,38							
	3			\$26.04							
l'en nessee	Avg.	2,624	11%	\$14.12	\$4.30	\$5.31	\$1.07	\$1.45	\$19.48	\$20.88	\$20.90
	1	-,	••••	\$12.48	•	<b>45.5</b>	•	<b>+</b>	••••		
	2			\$16.31							
	3			\$21.32							

EXHIBIT 2A: UNBUNDLED NETWOR ELEMENT RATE COMPARISON MATRIX SUMMARY - BELLSOUTH

STATE	LOOP RATE (per month)	PORT RATE (per month)	LOCAL ORIGINATING SWITCHING (per MOU)	LOCAL TERMINATING SWITCHING (per MOU)	OTHER SWITCHING AND TRANSPORT (per MOU)	DUF (per month)	DUF (per mouth)	Other Switching and Transport (per month)	Other Switching and Transport (per month)	FEATURE COST (per month)	AMORTIZED NRC (per month)	TOTAL DEN (per line, per month)
						Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes			_
			EY INPUTS					SUBTO	TALS			<u>L</u>
Alabama	\$16.66	\$2.24	\$0.000703	\$0.000703	\$0.000408	\$0.92	\$1.28	\$0.58	\$0.80		\$0.15	3,444
	\$11.55											
	\$20.04											
	\$33.65						<del></del>					
lorida	\$15.55	\$1.17	\$0.000766	\$0.000766	\$0.000505	\$2,45	\$2.94	\$0.71	\$0.85	\$2.26	\$0.17	2,960
	\$11.77											
	\$15.89											
	\$30.70											
Georgia	\$12.55	\$1.79	\$0.001633	\$0.001633	\$0.000559	\$1.66	\$2.40	\$0.79	\$1.14	\$0.00	\$0.11	3,574
	\$10.80											
	\$12.47 \$19.83											
						<u> </u>					****	
entucky	\$17.26 \$9.64	\$1.15	\$0.001197	\$0.001197	\$0.000782	\$0.93	\$1.23	\$1.10	\$1.46	\$0.00	\$0.06	3,272
	\$9.64 \$14.37											
	\$30.59											
Louisiana	\$16.24	\$1.36	\$0.001868	\$0.001868	\$0.000465	\$0.90	\$1.12	\$0.66	\$0.81	\$0.00	\$0.14	3,052
700131000	\$11.77	31.30	30.001808	30.001000	\$0.000405	\$0.70	31.12	30.00	30.61	\$0.00	30.14	3,032
	\$22.39											
	\$48.26											
M ississippi	\$22.37	\$2.64	\$0.001027	\$0.001027	\$0.000513	\$0.92	\$1.03	\$0.72	\$0.81		\$0.15	2,754
	\$10.98											
	\$15.91											
	\$25.04											
· · · · · · · · · · · · · · · · · · ·	\$43.68					- <del></del>						
North Carolina	\$14.18	\$2.28	\$0.001500	\$0.001500	\$0.000561	\$0.88	\$1.05	\$0.79	\$0.94	\$0.00	\$0.22	2,944
	\$10.75											
	\$19.05											
	\$30.33				, —— <u>. — — — — — — — — — — — — — — — — — </u>	- <del></del>						
South Carelina	\$16.51	\$2.80	\$0.001052	\$0.001052	\$0.000534	\$0.93	\$1.11	\$0.75	\$0.90		\$0.15	2,954
	\$13.76											
	\$20.38											
<u> </u>	\$26.04											
Tennessee	\$14.12	\$1.70	\$0.000804	\$0.000804	\$0.000432	\$0.98	\$1.36	\$0.61	\$0.85	\$0.00	\$0.09	3,438
	\$12.48											
	\$16.31 \$21.32											

ЗТАТЕ	DENSITY ZONES	ACCESS LINES (000s)	% of TOTAL ACCESS LINES		TOTAL SWITCHING AND TRANSPORT (per month)	TOTAL SWITCHING AND TRANSPORT (per month)	ALL OTHER (per month)	ALL OTHER (per month)	FULL UNEP ORIGINATING AND TERMINATING	FULL UNEP ORIGINATING AND TERMINATING	MAY 2002 FULL UNEP ORIGINATING AND TERMINATING
					Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes	Assumes DEM minutes
Arizons	Avg. 1 2	3,001	17%	EY INPUT \$15.85 \$5.91 \$12.31	\$10.05	SUBTOT \$8.80	\$0.36	\$0.33	\$26.26	TOTALS \$24.98	\$36.62
olorado	3 Avg. 1 2	2,950	16%	\$32.74 \$15.86 \$5.91 \$12.31	\$6.82	\$6.12	\$0.45	\$0.40	\$23.12	\$22.38	\$23.95
dako	Avg. 1 2	585	3%	\$32.74 \$20.42 \$15.81 \$24.01	\$6.93	\$5.96	\$0.50	\$0.44	\$27.85	\$26.82	\$35.14
0 W A	3 Avg. 1 2 3	1,165	6%	\$40.92 \$16.47 \$13.11 \$15.64 \$27.27	\$7.22	\$6.81	\$0.18	\$0.18	\$23.87	\$23.45	\$28.80
M innesota	Avg. 1 2 3	2,383	13%	\$17.87 \$8.81 \$12.33 \$14.48	\$7.38	\$6.80	\$0.39	\$0.35	\$25.64	\$25.02	\$25.02
fontans.	4 Avg. BRA 1 2	394	2%	\$21.91 \$23.98 \$23.10 \$23.90 \$27.13	\$10.45	\$10.15	\$0.52	<b>\$</b> 0.51	<b>\$</b> 34.95	\$34.64	\$39.98
Nebraska	3 Avg. 1 2 3	508	3%	\$29.29 \$17.51 \$12.14 \$28.11 \$62.50	\$8.69	\$8.80	\$0.31	\$0.31	\$26.51	\$26.62	\$30.80
New Mexico	Avg. 1 2 3	894	5%	\$21.43 \$17.75 \$20.30 \$26.23	\$5.13	\$4.44	\$0,48	\$0.42	\$27.04	\$26.29	\$25.91
North Dakota	Avg. 1 2 3	226	1%	\$17.79 \$14.78 \$24.92 \$56.44	\$8.59	\$10.01	\$0.57	\$0.64	\$26.95	\$28.44	\$33.24
) regon	Avg. 1 2 3	1,522	8%	\$15.00 \$13.95 \$25.20 \$56.21	\$7.27	\$6.59	\$0.75	\$0.70	\$23.02	\$22.29	\$22.17
South Dakota	Avg. 1 2 3	272	2%	\$21.09 \$17.01 \$18.54 \$24.37	\$12.22	\$10.25	\$0.41	\$0.37	\$33.72	\$31.71	\$32.58
Utah	Avg. urban suburban rural	1,140	6%	\$13.43 \$11.41 \$13.83 \$19.11	\$6.95	\$6.85	\$0.27	\$0.25	\$20.65	\$20.54	\$29.69
Washington	Avg. 1 2 3 4	2,647	15%	\$14.41 \$6.41 \$11.35 \$12.76 \$14.31	\$5.87	\$5.86	\$0.50	\$0.50	\$20.78	\$20.77	\$24.00
Wyoming	Avg. BRA i	274	2%	\$19.06 \$23.58 \$19.91 \$26.94 \$30.13	\$8.53	\$7.92	\$0.56	\$0.52	\$32.67	\$32.02	\$37.45

STATE	LOOP RATE (per month)	PORT RATE (per month)	Local originating SWITCHING (per MOU)	Local terminating SWITCHING (per MOU)	OTHER SWITCHING AND TRANSPORT (per MOU)	DUF (per month)	DUF (per month)	Other Switching and Transport (per month)	Other Switching and Transport (per month)	FEATURE COST (per month)	AMORTIZED NRC (per month)	TOTAL DEM (per month, pe line)
						Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes			-
Á rizon a	\$15.85 \$5.91 \$12.31	\$1.68	\$0.002800	UTS \$0.002800	\$0.001029	\$0.26	\$0.22	\$1.45	\$1.24	\$0.00	\$0.10	2,103
Colorado	\$32.74 \$15.86 \$5.91 \$12.31 \$32.74	\$1.53	\$0.001610	\$0.001610	\$0.000929	\$0.31	\$0.27	\$1.31	\$1.14	\$0.00	\$0.13	2,144
ldaho	\$20.42 \$15.81 \$24.01 \$40.92	\$1.34	\$0.001733	\$0.001733	\$0.000929	\$0.32	\$0.26	\$1.31	\$1.08	\$0.00	\$0.18	2042
OWA	\$16.47 \$13.11 \$15.64 \$27.27	\$1.15	\$0.001929	\$0.001929	\$0,000929	\$0.00	\$0.00	\$1.31	\$1.22	\$0.00	\$0.18	2,300
Minnesota	\$17.87 \$8.81 \$12.33 \$14.48 \$21.91	\$1.08	\$0.001810	\$0.001810	\$0.001301	\$0.39	\$0.35	\$1.84	\$1.66	\$0.00	\$0.00	2,240
Montana	\$23.98 \$23.10 \$23.90 \$27.13 \$29.29	\$1.58	\$0.002923	\$0.002923	\$0.000929	\$0,35	\$0.34	\$1.31	\$1.27	\$0.34	\$0.17	2,383
Nebraska	\$17.51 \$12.14 \$28.11 \$62.50	\$2.47	\$0.001989	\$0.001989	\$0,000929	\$0.29	\$0.30	\$1.31	\$1.33	\$0.00	\$0.02	2,511
New Mexico	\$21.43 \$17.75 \$20.30 \$26.23	\$1.38	\$0.001108	\$0.001108	\$0.000721	\$0.31	\$0.25	\$1.02	\$0.83	\$0.00	\$0.17	2,014
North Dakota	\$17.79 \$14.78 \$24.92 \$56.44	\$1.27	\$0.002435	\$0.002435	\$0.000929	\$0.39	\$0.46	\$1.31	\$1.56	\$0.00	\$0.18	2,947
Oregon	\$15.00 \$13.95 \$25.20 \$56.21	\$1.26	\$0,001330	\$0.001330	\$0.001178	\$0.39	\$0.34	\$1.66	\$1.44	\$1.06	\$0.36	2,134
South Dakota	\$21.09 \$17.01 \$18.54 \$24.37	\$1.84	\$0.003469	\$0.003469	\$0.001286	\$0.25	\$0.20	\$1.81	\$1.47	\$0.00	\$0.17	2,001
Utah	\$13.43 \$11.41 \$13.83 \$19.11	\$0.93 \$0.92 \$0.90 \$1.02	\$0.000000	\$0.000000	0.000890	\$0.18	\$0.16	\$1.26	\$1.16	\$4.76	\$0.09	2,272
Washington	\$14.41 \$6.41 \$11.35 \$12.76 \$14.31	\$1.34	\$0.001200	\$0.001200	\$0.001112	\$0.39	\$0.39	\$1.57	\$1.56	\$0.00	\$0.11	2,463
Wyoming	\$19.06 \$23.58 \$19.91 \$26.94 \$30.13 \$40.98	\$2.64	\$0.001854	\$0.001854	\$0.000929	\$0.39	\$0.35	\$1.31	\$1.17	\$0.00	\$0.18	2,212

EXHIBIT 4: UNBUNDLED NETWOR ELEMENT RATE COMPARISON MATRIX SUMMARY - SBC											
DENSITY ACCES STATE ZONES LINES (00	% of TOTAL TOTAL SWITCHING TOTAL SWITCHING FULL UNEP O S ACCESS LOOP RATE (per AND TRANSPORT (per AND TRANSPORT (per ALL OTHER (per ALL OTHER (per ORIGINATING AND	FULL UNEP May 2002 FULL ORIGINATING UNEP AND ORIGINATING AND TERMINATING									

STATE	ZONES	LINES (000s)	LINES	month)	month)	month)	month)	month)	TERMINATING	TERMINATING	TERMINATING
					Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes	Assumes DEM minutes
				EY INPUT	T	SUBTOTAL				TOTALS	
LEC - Ameritech					<del></del>	SUBIOTAL				TOTALS	
Illinois	wtd. avg.	7,216	12%	\$9.53	\$6.35	\$5.96	\$0.41	\$0.31	\$16.28	\$15.81	\$15.96
	metro			\$2.59							
	suburban rura i			\$7.07 \$11.40							
ndisna	wtd. avg.	2,396	4%	\$8.32	\$3.85	\$3.71	\$0.03	\$0.02	\$12.20	\$12.05	\$16.87
	metro	2,270	• • • • • • • • • • • • • • • • • • • •	\$8.03	\$3.63	45.71	30.03	\$0.02	\$12.20	\$12.03	#10.07
	suburban			\$8.15							
	rural			\$8.99							
dichigan	wtd. avg.	5,629	10%	\$10.16	\$4.59	\$4.09	\$0.30	\$0.25	\$15.06	\$14.50	\$14.50
	metro			\$8.47							
	suburban rural			\$8.73 \$12.54							
hio	wtd. avg.	4,306	7%	\$7.01	\$7.80	\$7.32	\$0.64	\$0.59	\$15.45	\$14.93	\$14.96
	urban			\$5.93							
	suburban			\$7.97							
	rural			\$9.52							_ =
Visconsin	wtd. avg.	2,294	4%	\$10.90	\$11.27	\$10.13	\$2.90	\$2.82	\$25.07	\$23.85	\$23.85
	suburban rural			\$10.90 \$10.90							
EC - Pacific Bell		<del></del>	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	310.70		<del></del>		<del></del>		······································	<del></del>
California	wtd. avg.	18,612	32%	\$9.93	\$6.77	\$5.44	\$0.08	\$0.08	\$16.78	\$15.46	\$27.47
	1			\$8.38							
	2			\$11.27							
levada	3	389	——————————————————————————————————————	\$19.64					******	400.60	
EVIGE	wtd. avg. urban	369	1%	\$20.52 \$11.77	\$13.24	\$10.02	\$0.08	\$0.08	\$33.84	\$30.63	\$30.54
	suburban			\$22.64							
	rural			\$66.25							
EC - Southwestern Bell											
rkansas	wid. avg.	1,071	2%	\$13.09	\$5.75	\$5.61	\$1.29	\$1.26	\$20.13	\$19.96	\$19.82
	urban			\$11.86							
	suburban rura!			\$13.64 \$23.34							
alisas	wtd. avg.	1,423	2%	\$13.30	\$5.75	\$5.16	\$1.30	\$1.15	\$20.35	\$19.60	\$19.49
	urban	23	2.4	\$11.86	45.75	\$3.10		•1.15	\$20.55	\$17.00	•12.42
	suburban			\$13.64							
	rural			\$23.34							
Aissouri	wid. avg.	2,742	5%	\$15.19	\$7.93	\$7.26	\$0.27	\$0.27	\$23.39	\$22.72	\$22.63
	urban			\$12.71							
	suburban rural			\$18.64 \$19.74							
	MO-Spgfld			\$16.41							
)klahoma	wtd. avg.	1,712	3%	\$15.71	\$8.45	\$8.03	\$1.37	\$1.30	\$25.53	\$25.03	\$24.88
	urban			\$12.14							
	suburban			\$13.65							
	rurat	10.240	100/	\$26.25		46.00			431.71	\$21.22	631.16
eras	wtd. avg. urban	10,348	18%	\$14.11 \$12.14	\$6,36	\$5.98	\$1.24	\$1.14	\$21.71	\$21.22	\$21.16
	suburban			\$13.65							
	rural-1			\$18,98							

EXHIBIT 4A: UNBUNDLED NETWOR ELEMENT RATE COMPARISON MATRIX SUMMARY - SBC

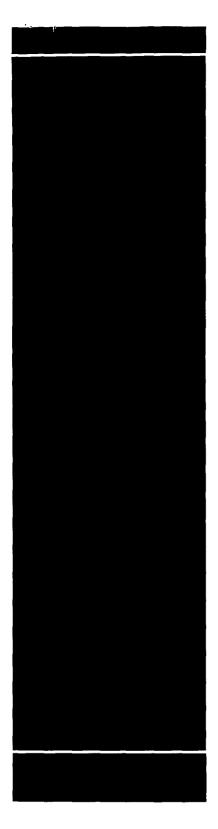
STATE	LOOP RATE (per month)	PORT RATE (per month)			OTHER SWITCHING AND TRANSPORT (per MOU)	DUF (per month)	DUF (per month)	Other Switching and Transport (per month)	Other Switching and Transport (per month)	FEATURE COST (per month)	AMORTIZED NRC (per month)	TOTAL DEM (per month, pe line)
						Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes			
			EY IN	PUTS				SUI	STOTALS			I
LEC - Ameritech												
Illino is	\$9.53 \$2.59 \$7.07 \$11.40	\$5.01	na	na	\$0:000947	\$0.32	\$0.23	\$1.34	\$0.95	\$0.00	\$0.08	1,764
Indiana	\$8.32 \$8.03 \$8.15 \$8.99	\$2.98	\$0.000000	\$0.00000	\$0.000617	\$0.02	\$0.01	\$0.87	\$0.73	\$0.00	\$0.01	2,071
M ichigan	\$10.16 \$8.47 \$8.73 \$12.54	\$2.53	\$0.000522	\$0.000522	\$0.000548	\$0.24	\$0.18	\$0.77	\$0.58	\$0.00	\$0.07	1,869
Ohio	\$7.01 \$5.93 \$7.97 \$9.52	\$4.63	\$0.000826	\$0.000826	\$0.000800	\$0.31	\$0.27	\$1.13	\$0.96	\$0.00	\$0.33	2,097
Wisconsin LEC - Pacific Bell	\$10.90 \$10.90 \$10.90	<b>\$</b> 6.25	\$0.001319	\$0.001319	\$0.001247	\$0.33	\$0.26	\$1.76	\$1.36	\$0.00	\$2.57	1,908
California	\$9.93 \$8.38 \$11.27 \$19.64	\$0.88	\$0.001480	\$0.001480	\$0.000944	\$0.00	\$0.00	\$1.33	\$0.98	\$0.90	\$0.08	1,814
Nevada	\$20.52 \$11.77 \$22.64 \$66.25	\$1.63	\$0.001610	\$0.001610	\$0.005408	\$0.00	\$0.00	\$7.63	\$5.52	\$0.00	\$0.08	1,786
LEC - Southwestern Bell Arkansas	\$13.09 \$11.86 \$13.64 \$23.34	\$1.61	\$0.001490	\$0.001490	\$0.000326	\$1.06	\$1.02	\$0.46	\$0.44	\$0.00	\$0.23	2,386
ansas	\$13.30 \$11.86 \$13.64 \$23.34	\$1.61	\$0.001490	\$0.001490	\$0.000326	\$1.06	\$0.91	\$0.46	\$0.39	\$0.00	\$0.24	2,115
M issouri	\$15.19 \$12.71 \$18.64 \$19.74	\$1.89	\$0.002192	\$0.002192	\$0.000446	\$0.00	\$0.00	\$0.63	\$0.56	\$0.00	\$0.27	2,196
Oklahoma	\$16.41 \$15.71 \$12.14 \$13.65 \$26.25	\$2.18	\$0.002259	\$0.002259	\$0.000489	\$1.06	\$0.99	\$0.69	\$0.64	\$0.00	\$0.31	2,303
Texas	\$14.11 \$12.14 \$13.65 \$18.98	\$2.22	\$0.001507	\$0.001507	\$0.000299	\$1.06	\$0.96	\$0.42	\$0.38	\$0.00	\$0.18	2,238

STATE	DENSITY ZONES	ACCESS LINES (000s)	% of TOTAL ACCESS LINES		TOTAL SWITCHING AND TRANSPORT (per month)	TOTAL SWITCHING AND TRANSPORT (per month)	month)	ALL OTHER (per month)	FULL UNEP ORIGINATING AND TERMINATING	FULL UNEP ORIGINATING AND TERMINATING	MAY 2002 FULL UNEP ORIGINATING AN TERMINATING	
					Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes	Assumes DEM minutes	
				EY INPUT		SUBTOT	ALS			TOTALS		
LEC - NYNEX Maine	Avg.	760	2%	\$16.18	<b>\$</b> 7.25	45.70	** 10	\$0.17	***	\$22.07	***	
	Avg.	700	270	\$11,44	\$1.23	\$5.72	\$0.18	\$0.17	\$23.61	\$22.07	\$22.18	
	2			\$13.47								
f assach usetts	Avg.	4,589	10%	\$18.75 \$14.98	\$12.91	\$10.26	\$0.19	\$0.18	\$28.08	\$25.42	\$25.77	
· #35@Cii #3Ett3	Avg.	4,389	1070	\$7.54	314.71	\$10.20	\$0.19	30.18	\$28.08	\$23.42	323.11	
	2			\$14.11								
	3 4			\$16.12 \$20.04								
lew Hampshire	Avg.	825	2%	\$18.10	\$7.21	\$6.03	\$0.46	\$0.38	\$25,77	\$24.51	\$29.77	
•	1			\$11.97					******			
	2			\$16.04 \$25.00								
lew York	Avg.	12,253	27%	\$11.49	\$6.41	\$5.59	\$0.08	\$0.08	\$17.98	\$17.17	\$17.35	
	1			\$7.70								
	2 3			\$11.31								
thode Island	Avg.	681	2%	\$15.51 \$13.93	\$6.56	\$5.73	\$0.04	\$0.03	\$20.54	\$19.70	\$22.07	
	1			\$11.19	*****	222		70.02	44.4.	******	<b>422.</b> 07	
	2			\$15.44								
/ermont	Avg.	378	1%	\$19.13 \$14.41	\$12.71	\$10.54	\$0.04	\$0.03	\$27,16	\$24.99	\$25,09	
	1		.,-	\$7.72		<b>\$10.5</b> **	40.04	20.03	<b>5</b> 2.,,,,		<b>443.</b> 02	
	2 3			\$8.35								
EC - BELL ATLANTIC	<del></del>	<del></del>		\$21.63				<del></del>	<del></del>	<del></del>		
D.C.	1111	1,019	2%	\$10.81	\$9.94	\$6.02	\$0.00	\$0.00	\$20.75	\$16.83	\$16.83	
)elaware	Avg.	613	1%	\$12.05	\$9.68	\$8.09	\$0.69	\$0.66	\$22.42	\$20.81	\$20.31	
	1 2			\$10.07 \$13.13								
	3			\$16.67								
Maryland	Avg.	4,101	9%	\$14.50	\$13.15	\$11.50	\$0.26	\$0.25	\$27.91	\$26.25	\$19.28	
	1 2			\$12.11 \$12.85								
	3			\$25.96								
	4			\$18.40								
iew Jersey	Avg.	7,030	16%	\$9.52 \$8.12	\$7,53	<b>\$</b> 5.55	\$0.10	\$0.07	\$17.15	\$15.14	\$15.14	
	2			\$9.59								
	3	2 2 2 2		\$10.92	•		****		10000	\$10.00	810.17	
Pennsylvania	Avg.	7,309	16%	\$13.81 \$10.25	\$6.49	\$5.25	\$0.20	\$0.17	\$20.50	\$19.23	\$19.36	
	2			\$11.00								
	3			\$14.00								
/Irginia	Avg.	4,460	10%	\$16.75 \$13.76	\$9,56	<b>\$</b> 7.57	\$0.54	\$0.52	\$23,86	\$21.85	\$21.68	
Bu.m	Avg.	4,700	10/0	\$10.74	<b>3</b> 7,30	Ψ1.51	<b>40.34</b>	<b>4</b> 0.31		-a	-21.00	
	2			\$16.45								
W W1-1-	3	907	2%	\$29.40	620.62			\$0.12		\$44.02	\$44.00	
West Virginia	Avg.	907	270	\$24.58 \$14.49	\$20.82	\$19.32	\$0.13	\$0.12	\$45.52	344.02	\$44.02	
	2			\$22.04								
	3			\$43.44								

EXHIBIT 5A: UNBUNDLED NETWOR ELEMENT RATE COMPARISON MATRIX SUMMARY - VERIZON

STATE.	LOOP RATE (per month)	PORT RATE (per month)	Local originating SWITCHING (per MOU)	Local terminating SWITCHING (per MOU)	OTHER SWITCHING AND TRANSPORT (per MOU)	DUF (per month)	DUF (per month)	Other Switching and Transport (per month)		FEATURE COST (per month)	AMORTIZED NRC (per month)	TOTAL DE! (per iline, pe month)
						Assumes 1411 originating minutes	Assumes DEM minutes	Assumes 1411 originating minutes	Assumes DEM minutes			
			EYINPL	TS				SL	BTOTALS			
LEC - NYNEX Maine	\$16.18 \$11.44 \$13.47 \$18.75	\$0.94	\$0.001680	\$0.001680	\$0.001529	\$0.04	\$0.03	\$2.16	\$1.64	\$0.00	\$0.14	1,871
M assachusetts	\$14.98 \$7.54 \$14.11 \$16.12 \$20.04	\$2.00	\$0.003537	\$0.003537	\$0.001540	\$0.04	\$0,03	\$2.17	\$1.65	\$0.00	\$0.15	1,870
New Hampshire	\$18.10 \$11.97 \$16.04 \$25.00	\$0.71	\$0,002064	\$0.002064	\$0,000853	\$0.43	\$0.35	\$1.20	\$0.98	\$0.20	\$0.03	2,007
New York	\$11.49 \$7.70 \$11.31 \$15.51	\$2.57	\$0.001147	\$0.001111	\$0.000578	\$0.00	\$0.00	\$0.82	\$0,63	\$0.23	\$0.08	1,910
Rhode Island	\$13.93 \$11.19 \$15.44 \$19.13	\$1.86	\$0.001358	\$0.001192	\$0.000853	\$0.04	\$0.03	\$1.20	\$0.98	\$0.32	\$0.00	2,000
erm ont	\$14.41 \$7.72 \$8.35 \$21.63	\$1.03	\$0.004003	\$0.004003	\$0.001228	\$0.04	\$0.03	\$1.73	\$1.41	\$0.06	\$0.00	2,009
EC - BELL ATLANTIC				· <del></del>	· · · · · · · · · · · · · · · · · · ·							
O.C. Delaware	\$10.81 \$12.05 \$10.07 \$13.13 \$16.67	\$1.55 \$2.23	\$0.003000 \$0.003634	\$0.003000	\$0.000696	\$0.00	\$0.00	\$0.98	\$0.52 \$0.22	\$0.00	\$0.00 \$0.56	1,317
Maryland	\$14.50 \$12.11 \$12.85 \$25.96 \$18.40	\$1.90	\$0.003800	\$0.003800	\$0.000362	\$0.05	\$0.04	\$0.51	\$0.43	\$1.36	\$0.22	2,058
lew Jersey	\$9.52 \$8.12 \$9.59 \$10.92	\$0.73	\$0.002773	\$0.002508	\$0.000163	\$0.10	\$0.07	\$0.23	\$0.16	\$0.00	\$0.00	1,751
ennsylvania	\$13.81 \$10.25 \$11.00 \$14.00 \$16.75	\$1.90	\$0.001802	\$0.001615	\$0.000242	\$0.09	\$0.07	\$0.34	\$0.25	\$0.00	\$0.11	1,799
Virginia	\$13.76 \$10.74 \$16.45 \$29.40	\$1,30	\$0.004129	\$0.002079	\$0.000162	\$0.09	\$0.07	\$0.23	\$0.17	\$0.00	\$0.46	1,874
West Virginia	\$24.58 \$14.49 \$22.04 \$43.44	\$1.60	\$0.008868	\$0.005622	\$0.000536	\$0.13	\$0.12	\$0.76	\$0.70	\$0.00	\$0.00	2,277

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### **How Much Pain From UNE-P?**

### **Analysis of UNE-P Economics for the Bells**

- We have downgraded our ratings on SBC, BellSouth, and Verizon to Hold from Buy because of the estimated impact of UNE-P based competition on these companies' core residential service base. We do not expect the group to outperform the market over the next 12 months.
- Line losses to UNE-P are increasing rapidly. We expect the Bells to lose 1.6 million lines in the third quarter, up from 1.1 million in the second. Based on our estimates, wholesale lines will account for more than 12% of Bell switched access lines at year-end 2003 and more than 17% in 2005.
- The economics of UNE-P will put additional pressure on Bell margins and earnings. We believe the Bells generate negative EBITDA from wholesale lines in 18 states. The long distance market will only be a partial offset as competitive conditions have dramatically reduced its profitability, making it an unfair tradeoff under these conditions.
- SBC and BellSouth are at most risk based on our estimates for line loss and the economics in these regions. While we believe Verizon is less exposed, the company's relatively high leverage makes its equity valuation more sensitive to decreases in free cash flow that can result from market share losses.
- The regulatory picture remains muddled. The Bells have pinned their hopes on the FCC, which, in our view, will find it difficult to dramatically curtail UNE-P (i.e., raise residential rates for 6.1 million households) given the scandals that have plagued the telecommunications industry.
- At this point, the final impact of UNE-P remains unclear. However, our analysis suggests that the risks to the Bells have increased substantially because of this competitive development, warranting our cautious approach to the stocks, even at these levels.
- We reduced our 12-month price targets to \$30 from \$36 for SBC, to \$34 from \$50 for Verizon, and to \$26 from \$28 for BellSouth based on our reduced free cash flow estimates in our DCF analyses. However, we believe the current dividend yields, which are not jeopardized by our new estimates, provide some support for the stocks at current levels.

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# **Summary**

We have downgraded our ratings on SBC, BellSouth, and Verizon to Hold from Buy based on our analysis of the impact UNE-P based competition will have on the companies' economics. While we continue to believe these carriers could be the long-term winners in the industry, we think investors need a clear picture of how UNE-P will affect their economics before considering an investment in these stocks. Our analysis suggests that the impact of UNE-P will be more dramatic than we had originally expected. In the end, we believe we have shown that the risks of UNE-P based competition is enough to step back from these stocks until we get more visibility as to the longer term effects of this competitive threat.

UNE-P is a viable strategy in 82% of the residential market, suggesting that further entry is likely

Retail line losses to UNE-P based competitors are set to ramp up in the second half of the year, largely because of MCI's national plan and AT&T's efforts in eight states. However, our analysis shows that UNE-P can be a viable strategy in more than 33 states, which represent 82% of the residential market, suggesting that further entry by established resellers and new entrants is likely. We expect UNE-P lines to grow to more than 11 million in the second half of 2002 from 7.5 million in the first half, representing 7.2% of the switched access lines. We estimate that retail residential lines will decline by 8.6 million in 2003, more than 56% of which is due to the effects of UNE-P. By year-end 2003, wholesale lines should represent more than 12% of switched access lines for the Bells and more than 17% in 2005.

UNE-P rates in 18 states do not allow the Bells to generate positive EBITDA on lines' lost to competitors Our analysis shows that UNE-P rates in 18 states do not allow the Bells to generate positive EBITDA on lines lost to competitors. Meanwhile, the capital intensity of the business is largely unaffected by the retail/wholesale residential line mix, suggesting free cash flow will suffer. For every \$1 in revenue lost to UNE-P based competition, we estimate the Bells lose \$0.70-0.85 of EBITDA and \$0.45-0.60 of after-tax operating cash flow (EBITDA less capex).

Under these conditions, we do not believe the local competition for long distance trade-off is an attractive one for the Bells, as long distance will only partially offset the impact of UNE-P based competition. By year-end 2002, we expect 75% of Bell lines to be certified for long distance, up from the 31% at the end of the second quarter. However, the trade-off is not a fair one. Years of hyper-competition between long distance and wireless carriers have had a dramatic impact on long distance economics, while the residential local service sector has been largely shielded. Although the Bells need to add just 1.5 long distance customers to make up for the revenue loss of one UNE-P customer, we believe they need to add 5.4 long distance customers to make up for the EBITDA loss of one local customer. This implies a lot of effort required only to stand still.

Based on our revised estimates, we now believe earnings in 2003 will decline roughly 1.8% for the Bells as a group. This shift from retail to wholesale lines should impact revenues by roughly \$2.7 billion, or 2.7% of estimated 2002 wireline revenues. The EBITDA impact would be roughly \$1.6 billion on our old EBITDA estimate of \$63.4 billion for the three carriers. As there is no avoided capital cost in the conversion of retail lines to wholesale, the after-tax free operating cash flow impact would be roughly \$1.2 billion. Because of these underlying trends, the carriers are likely to double their cost-cutting efforts.

Table 1: Sensitivity of EPS to Local Line Loss

	Revenue lost	EBITDA lost	EPS impa	act Assun	ning Line I	oss of	f Free Cash Flow Impact				
	per line / mo1	per line / mo1	1 <b>M</b>	2M	3 <b>M</b>	5 <b>M</b>	1M	2M	3M	5M	
SBC	\$20.22	\$17.47	\$0.04	\$0.08	\$0.12	\$0.20	\$137	\$274	\$411	\$685	
٧Z	17.89	15.26	0.04	0.09	0.13	0.22	123	245	368	614	
BLS	18.29	15.65	0.06	0.13	0.19	0.32	126	252	377	629	
Q	14.73	11.98	0.05	0.09	0.14	0.24	96	193	289	481	

<sup>1</sup> Does not include expected revenue or EBITDA gain from interLATA services growth.

Source: UBS Warburg LLC estimates

We find the regulatory outcome to be the most difficult to project. However, we do not expect the Bells to receive relief on this issue within the next 12 months. The May 24 Court of Appeals for the District of Columbia ruling was a win for the Bells. However, we believe it will be difficult for the FCC to institute significant changes in regulation that would effectively lead to increasing rates on a projected 6.3 million UNE-P households and appear to leave consumers holding the bag for the scandals that have plagued the industry. FCC actions that force competitors to use third-party switching or transport in markets where it is available likely would be phased in over time but would eventually slow line loss for the Bells. However, an outcome that removes uncertainty surrounding UNE-P regulation and leaves the economics intact may encourage new entrants and accelerate retail line loss for the Bells.

 $<sup>^{\</sup>rm 2}$  Assumes effective tax rate of 33% for SBC, 34% for VZ, 36% for BLS, and 45% for Q.

Table 2: Changes to Estimates (\$MM)

					В	ellSouth				
			2002				2003	<del>-</del>	% grov	wth
	Old	New	\$ change	% Change	Old	New	\$ change	% Change	Old	New
Wireline Revenue	18,421	18,312	-109	-0.6%	18,731	17,993	-738	-3.9%	1.7%	-1.7%
Total Revenue	29,009	28,900	-109	-0.4%	29,582	28,842	-740	-2.5%	2.0%	-0.2%
EBITDA	12,837	12,784	-53	-0.4%	13,120	12,761	-359	-2.7%	2.2%	-0.2%
Net Income	4,035	3,924	-111	-2.7%	4,217	3,836	-380	-9.0%	4.5%	-2.2%
EPS	\$2.14	\$2.09	(\$0.05)	-2.3%	\$2.18	\$2.02	(\$0.16)	-7.3%	1.9%	-3.2%
						SBC				
			2002				2003		% grov	wth '
	Old	New	\$ change	% Change	Old	New	\$ change	% Change	Old	New
Wireline Revenue	38,768	38,601	-167	-0.4%	38,884	37,482	-1,402	-3.6%	0.3%	-2.9%
Total Revenue	52,372	52,205	-167	-0.3%	52,937	51,535	-1,402	-2.6%	1.1%	-1.3%
EBITDA	21,377	21,357	-20	-0.1%	21,479	20,958	-521	-2.4%	0.5%	-1.9%
Net Income	7,728	7,715	-13	-0.2%	7,811	7,462	-349	-4.5%	1.1%	-3.3%
EPS	\$2.31	\$2.31	(\$0.00)	-0.2%	\$2.36	\$2.25	(\$0.11)	-4.5%	2.1%	-2.3%
					1	Verizon				
			2002				2003		% grov	wth
	Old	New	\$ change	% Change	Old	New	\$ change	% Change	Old	New
Wireline Revenue	40,912	40,897	-15	0.0%	39,655	39,136	-519	-1.3%	-3.1%	-4.3%
Total Revenue	66,737	66,722	-15	0.0%	67,092	66,575	-518	-0.8%	0.5%	-0.2%
EBITDA	29,049	28,772	-277	-1.0%	28,836	28,160	-676	-2.3%	-0.7%	-2.1%
Net Income	8,332	8,150	-182	-2.2%	8,587	8,130	-457	-5.3%	3.1%	-0.2%
EPS	\$3.05	\$2.98	(\$0.07)	-2.2%	\$3.12	\$2.96	(\$0.16)	-5.1%	2.3%	-0.7%
;						Total		_		
			2002				2003		% grov	wth
	Old	New	\$ change	% Change	Old	New	\$ change	% Change	Old	New
Wireline Revenue	98,101	97,811	-291	-0.3%	97,270	94,611	-2,660	-2.7%	-0.8%	-3.3%
Total Revenue	148,117	147,827	-291	-0.2%	149,611	146,951	-2,660	-1.8%	1.0%	-0.6%
EBITDA	63,263	62,914	-350	-0.6%	63,436	61,880	-1,556	-2.5%	0.3%	-1.6%

Source: UBS Warburg LLC estimates

Net Income

20,095 19,789

-1.5%

-306

20,614

19,428

-1,186

-5.8%

2.6%

-1.8%

# **Rebundling Overview**

### **UNE-P Background**

The Telecommunications Act of 1996 (Telecom Act) enabled competitors to use RBOC facilities to provide telecom services to business and residential customers to accelerate competitive entry. The Act appears to have laid out two ways to access incumbent networks: through resale and the use of unbundled network elements (UNEs). Resale, often called total service resale (TSR), allows competitors to enter a market without deploying network infrastructure by requiring incumbents to provide the complete local service package to competitors on a wholesale basis. Wholesale prices for TSR were set by the state based on *avoided costs*, the costs incumbents avoid in selling local service on a wholesale instead of retail basis. Typical discounts range from 15-25%.

Table 3: State by State Discounts for Total Service Resale

VZ	Connecticut	17.8%	Q	Arizona	12% (R), 18% (B)
	DC	24.7%		Colorado	13% (R), 15.7% (B)
	Delaware	20.0%		Idaho	18.3%
	Maryland	19.9%	•	lowa	10.27% (R), 18.5% (B)
	New Jersey	20.0%		Minnesota	21.5%
	West Virginia	17.8%		Montana	18.1%
	Pennsylvania	20.7%		Nebraska	22.5% (R), 18.3% (B)
	Virginia	21.3%		New Mexico	15.1%
	Maine	25.70% (B), 23.00% (R)		North Dakota	16.2%
	Massachussetts	29.5%		Oregon	22.0%
	New Hampshire	20.30% (B), 19.00% (R)		South Dakota	21.6%
	New York	21.7%		Utah	14.5%
	Rhode Island	16.38% (B), 18.82% (R)		Washington	14.7%
	Vermont	27.66% (B), 20.43% (R)		Wyoming	17.4%
	Average	21.3%		Average	16.0%
SBC	Illinois	17.8%	BLS	Alabama	16.3%
	Indiana	25.0%		Florida	16.81% (B), 21.83% (R
	Michigan	21.6%		Georgia	17.30% (B), 20.30% (R
	Ohio	21.5%		Kentucky	15.54 (B), 16.79% (R)
	Wisconsin	21.6%		Louisiana	20.7%
	California	14.5%		Mississippi	15.8%
	Connecticut	17.8%		North Carolina	17.60 (B), 21.50% (R)
	Nevada	10.40%(R), 13.5%(B)		South Carolina	14.8%
	Arkansas	14.5%		Tennessee	21.6%
	Kansas	14.9%		Average	20.2%
	Missouri	15.8%			
	Oklahoma	19.8%			
	Texas	21.6%			
	Average	18.3%			

<sup>\*</sup> R for residential, B for business. Source: Company reports and RRA

A number of carriers, most notably USN Communications, pursued strategies through the use of resale. The carriers expected the inclusion of value-added features and long distance service would improve the meager margins associated with resale. These companies typically focused on the business market where revenue per line and long distance minutes of use were higher. Despite this, no CLEC has found a way to make the economics of resale work.

The Telecom Act also required the ILECs to provide access to individual elements of their networks on terms prescribed by the FCC. According to the Telecom Act, access to network elements should be available when that element is proprietary in nature and the failure to access it will *impair* the ability of the CLEC to provide competitive telecommunication services. In its First Local Implementation Order in 1996, the FCC stated that a CLEC's ability to offer a telecommunications service is diminished in value (impaired) if the quality of the service is reduced or the cost of providing the service rises by not having access to that network element. The FCC designated seven network elements that the Bells were required to "unbundle" as part of this process:

- Network interface devices (NID, defined as any potential means of interconnection with customer premises inside wiring).
- Local loops (including dark fiber, inside wiring, and portions of loops).
- Local and tandem switches (including all software features).
- Interoffice transmission facilities (between wire centers or switches owned by ILECs).
- Signaling and call-related database facilities (which are signaling links, signaling transfer points [STP], and databases for line information, toll free calling, number portability, calling name, and advanced intelligent network).
- Operating support systems and information (consists of pre-ordering, ordering, provisioning, maintenance and repair, and billing functions).
- Operator and directory assistance facilities (any automatic or live assistance to a consumer to arrange for billing of completion of a call).

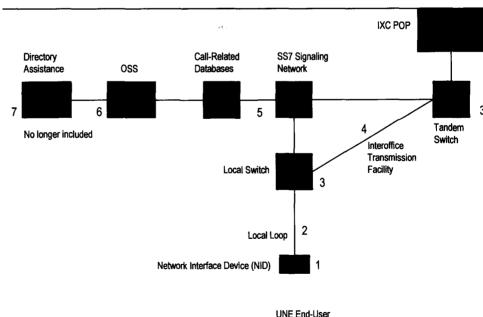


Chart 1: Unbundled Network Elements-Platform (UNE-P) Diagram

Source: UBS Warburg LLC

In 1999, in its Third Report and Order on Local Competition, the FCC determined that operator services and directory assistance (OS/DA) no longer needed to be included in the bundle, as the market for these services had advanced since 1996 and

existing competitors had third-party alternatives. The FCC also no longer required the ILECs to offer UNE-P to competitors in the top 50 MSAs that serve customers with more than three lines and eliminated the unbundling of shared transport where circuit switching was not unbundled. Finally, ILECs were not required to unbundle packet switching, as CLECs themselves are deploying packet switches to serve high-volume customers. Registered CLECs could, therefore, lease elements from incumbents at wholesale prices established by the states based on *forward-looking costs*, or total elemental long run incremental cost (TELRIC). TELRIC was computed based on costs from a hypothetical network using the latest telecommunications equipment.

Following the Telecom Act, competitors used TSR in markets where they did not deploy infrastructure and UNEs in conjunction with network investments (i.e., CLECs would often install a switch and interoffice fiber while leasing the last mile, or loop, the so-called UNE-L strategy). Meanwhile, the CLECs pushed to be able to sell end-to-end telecommunications services using the entire UNE platform. This "rebundling" approach, or UNE-P, would be very similar to TSR from a network standpoint but benefit from TELRIC-based pricing and other factors that dramatically improved the profitability of resold service. These factors include the full economic benefit from access and subscriber line charges (SLC), vertical services, and other fees paid to local service providers by consumer and primary inter-exchange carriers.

Despite the availability of UNE-P, it has only recently become attractive on a broad basis. As part of the Section 271 certification process, state PUCs have reduced rates for UNEs as a precondition to Bell long distance approval in a state. States such as New York and Texas were among the first to move toward lower UNE rates and soon saw entry by AT&T, MCI, and Sprint.

#### Rebundlers

AT&T and MCI are pursuing residential local strategies based on UNE-P to capitalize on their consumer long distance customer bases and to stem the flow of market share as the Section 271 process progresses. AT&T currently offers local service in seven states and announced that it will enter New Jersey in September. We also expect the company to announce its entry to Pennsylvania in the fourth quarter of 2002. Management has stated that it will enter states with UNE-P discounts of 45% or greater off retail prices. We believe existing UNE-P pricing gives AT&T the margin it requires to enter as many as 27 additional states. Considering the modest \$2-3 million that the company needs to invest to get up and running in a new state, we believe additional state entry to be inevitable.

#### Chart 2: Local Operations of Rebundlers (existing and announced)

Source: Company reports and UBS Warburg LLC

AT&T had 1.5 million UNE-P customers within its six-state region in the second quarter, up from 1.3 million in the prior quarter. AT&T typically enters a state with a package of local and long distance voice with calling features priced at a 5-10% discount to the current retail offering of the RBOC. Its strategy has been to enter a state after the wholesale discounts have been increased but prior to Bell long distance service approval. In Michigan, where the company has been engaged since February 13, it claims 6% market share of residential lines. In New York, in operation since December 1999, AT&T management believes it has mid-teen percentage of the market. The company claims to spend roughly \$2-3 million in capital upon entering a state and expects to be EBITDA positive within two years of operations. Management has stated that it recently turned EBITDA positive in New York.

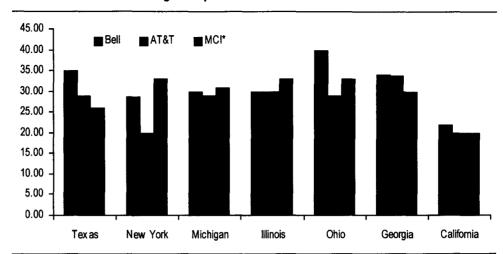


Chart 3: Local Service Package Comparison in Selected Markets<sup>1</sup>

Source: Company reports and UBS Warburg LLC

MCI is taking a much broader approach than AT&T and began offering bundled local and long distance services using UNE-P in 35 states under its branded Neighborhood Plan in April 2002. The company manages these operations in 11 states and farms out RBOC integration to its partner Z-Tel in 24 other states. Z-Tel management indicated that MCI had more than 800,000 local lines in service at the end of the second quarter of 2002. The company intends to extend the Neighborhood Plan to all the states across the nation by April 2003. The company has not updated these plans since its Chapter 11 filing on July 21.

The two basic Neighborhood plans include a metered and all-you-can-eat long distance option. For \$49.99-59.99 per month, depending on the state (e.g., \$49.99 in New York), Neighborhood Complete provides residential customers with anytime, all-distance calling, call waiting, caller ID, speed dialing, three-way calling, and voice mail. Another plan, Neighborhood Choice, provides local service, calling features, and long distance to other Neighborhood members for a lower price (e.g., \$32.99 in New York) with toll calls of seven cents per minute to nonmembers.

At this point, it is unclear what WorldCom's Chapter 11 bankruptcy filing will have on its local resale efforts. We believe the business as a whole is cash-flow negative and expect it to remain so for the foreseeable future. While it does not appear that the company's mass-market promotion has been pulled, we believe it has scaled back plans to restart its outbound telemarketing program, which proved very successful when The Neighborhood was launched.

Sprint, the No. 3 consumer long distance provider, attempted to rebundle residential local service in Texas and New York but management did not believe it could profitably take share. Management recently suggested that it was reconsidering its decision in light of the more attractive discounts. As the company has been looking for ways to jump start revenue growth in its local and global market units without additional capital spending (including initiatives in prison inmate and hotel concierge services), we believe regulatory visibility may nudge Sprint into the market.

<sup>1</sup> Local service package includes unlimited local calling and three or more calling features. SBC in Ohio offers 10 features.

<sup>\*</sup> MCI includes free long distance to other neighborhood customers.

Smaller companies, such as Talk America, Z-Tel, InfoHighway, ACCESS Integrated Networks, and SupraTelecom, also have UNE-P operations. Z-Tel currently offers bundled local and long distance in 38 states. Talk America is actively marketing the local and long distance bundle in seven states, ending the second quarter with 244,000 bundled lines, up from the 194,000 lines billed at the end of the first quarter. Z-Tel, the other public local service reseller and MCI partner, had just 200,000 local lines in service, having pulled back from its marketing campaign to focus more intensely on its wholesale opportunities. (See our June 25, 2002 note regarding our recent company visit, ZTEL Meeting Suggests UNE-P May Have Some Legs.) We believe there is a small but growing number of carriers seeking to expand their UNE-P operations but lacking the capital do to so. Again, we believe there is risk that regulatory clarity that leaves UNE-P largely intact could enable these companies to attract the modest amount of capital required to move ahead with plans in the local market.

## **Incumbent Economics of UNE-P**

#### **Drain on Residential Revenues**

We believe Bells lose \$15-20 in monthly residential revenue per UNE-P line

We believe the Bells lose \$15-20 in revenue per line per month on average for each residential access line lost to UNE-P based competitors. The incumbents lose the average monthly revenues per line offset by wholesale revenues from the competitor's use of their networks. Lost revenue per line varies dramatically in each state based on the inputs to this calculation, which we describe in detail below.

Table 4: Monthly Local Residential Revenue Lost per Line

Local service revenue =	+ Basic local	•
	+ Vertical Features	
	+ Access/IntraLATA toll	
	+ SLC	
	+ LNP, 911 and other surcharges	
UNE-P revenue =	+Loop	
	+Local switching (fixed & variable)	
	+Tandem switching	
	+Transport	
Difference =	Total revenue lost	

Source: UBS Warburg LLC

First, we focus on calculating the average local residential monthly bill. This includes basic local service revenues, vertical service revenues, SLC, a fee for universal service fund (FSUF) collected from the end-user, and terminating and originating access collected from the inter-exchange carriers. Based on our survey, New Jersey has the lowest basic local rate at \$7.47 per line per month, while Arkansas has the highest at \$31.95 per line per month. We assume vertical services such as call waiting, caller ID, and call forwarding add \$8-12 per month to the average residential local bill and originating and terminating access revenues add roughly \$4-5 per month. We believe we capture intraLATA toll revenues within the basic local rates and access revenues. Typically, these access revenues are broken-out by the Bells under a separate line item in the income statement (SBC's new disclosure does not break out access revenues). Access revenues include switched and special access. While special access revenues continue to be one of the fastest growing products for the Bells, UNE-P based competition and the resulting loss of switched access revenues are already putting pressure on this revenue category.

Additionally, the Bells charge SLC, a component of access charges, to compensate for the cost of installation and maintenance of the telephone wire, poles, and other facilities that link the central office to the end-user. The SLC currently averages \$5.52 per line per month across the nation, ranging from \$3.87 in Washington, D.C. to \$6.00 for the majority of the states; it is expected to increase to \$6.50 per month in July 2003. The FSUF fee will add roughly \$0.50 per line to the monthly bill. The Bells also charge roughly an additional \$0.50 per line for local number portability and 911 fees. We have not included local number portability (LNP) and 911 fees in our analysis.

Rural loops cost 2-3 times the urban loops, making the UNE-P economics stronger in the densely populated areas The final tally for a local service bill is approximately \$34.29 per month in the United States, ranging from \$28.04 per month in New Jersey to \$51.63 per month in Arkansas. While the Bells lose this revenue with each residential retail line lost, they capture wholesale revenues for the use of their network platform.

The UNE-P rate in each state includes charges for the loop, end-office switching, tandem switching, and shared transport. Loop rates have been "de-averaged", meaning that shorter last mile connections in urban markets are lower than suburban and rural loops. Illinois sports the lowest urban loop rate, at \$2.59 per loop per month, while Montana has the highest by far, at \$23.10 per month. The rural rate for the loop often is more than double the price of an urban loop, making the economics of UNE-P far stronger in the densely populated areas. This framework has caused AT&T and MCI to focus their local service efforts in major cities, where they can also benefit from sales and marketing economies.

The wholesale price for local switching includes a fixed and variable portion. The fixed monthly charge ranges from \$0.73 per port in New Jersey to \$5.34 per port in Indiana. Local switching also includes variable pricing based on the number of minutes used and ranges from \$0.0007 per minute in four states in Qwest's region (North Dakota, Iowa, Montana, and Nebraska) to \$0.0127 in Rhode Island. Illinois does not include a variable piece but rather includes the full cost in the fixed portion of \$5.01 per port. For purposes of our study, we assumed that the average consumer uses 1,000 minutes per month. Lines used primarily for dial-up Internet access, however, may substantially exceed this amount, dramatically altering the economics of UNE-P for the competitor. Considering most UNE-P based competitors charge a flat rate for unlimited calling, extremely high-use lines can be unprofitable for the carriers, which often find it more economical to switch these lines to the resale framework.

Fees for wholesale tandem switching and transport are based on minutes of use (MOU). However, it is difficult to assess actual usage, which depends not just on total MOU but calling patterns, as well. A number of states, including New York, Connecticut, and Ohio, do not specifically break out a charge for shared transport. For purposes of our study we assumed 400 MOU for both tandem switching and shared transport.

The sum of these factors (loop plus switching plus tandem switching plus shared transport) is the monthly wholesale rate per line for the UNE platform, which the Bells collect from competitors. Based on our assumption that the rebundlers will attract 80% of the urban loops, 15% of the suburban loops, and only 5% of the rural loops, we arrive at an average UNE-P rate of \$15.91 per month across all the states in the United States. The average UNE-P rate ranges from \$8.92 per month in Illinois to \$28.26 per month in Wyoming. The average for Ameritech states is \$13.40 per month.

Table 5: Components of Residential Local Service Revenue (per month per line)

		Basic	Diver	Dive	Plus:	Dive	Total	Leco	Total
		Local service	Plus: SLC	Plus: Vertical serv.	Access/ IntraLATA toll	Plus: USF	Total Retail Revenue	Less: UNE-P	Total Revenue Los
z	Connecticut	13.43	5.69	9.00	5.00	0.62	33.74	20.81	12.93
2	DC	12.78	3.87	9.00	5.00	0.57	31.22	15.87	15.35
	Delaware	11.29	6.00	9.00	5.00	0.57	31.86	16.03	15.83
	Maryland	16.81	5.69	9.00	5.00	0.57	37.07	18.82	18.25
	New Jersey	7.47	6.00	9.00	5.00	0.57	28.04	12.61	15.43
	West Virginia	29.00	6.00	9.00	5.00	0.57	49.57	26.50	23.07
	Pennsylvania	11.61	6.00	9.00	5.00	0.57	32.18	15.11	17.07
	Virginia	12.64	6.00	9.00	5.00	0.57	33.21	17.07	16.14
	Maine	16.35	6.00	9.00	5.00	0.57	36.92	15.34	21.57
	Massachusetts	16.85	6.00	9.00	5.00	0.57	37.42	15.09	22.33
	New Hampshire	13.86	6.00	9.00	5.00	0.57	34.43	25.54	8.89
	New York	11.05	6.00	9.00	5.00	0.57	31.62	12.33	19.28
	Rhode Island	14.78	6.00	9.00	5.00	0.57	35.35	27.46	7.89
	Vermont \	17.20	6.00	9.00	5.00	0.57	37.77	13.85	23.92
	Average/Total	12.47	5.95	9.00	5.00	0.57	32.99	15.10	17.89
		,,		2.22			-21.00		
LS	Alabama	16.30	6.00	11.50	5.00	0.49	39.29	22.82	16.47
-	Florida	11.00	6.00	11.50	5.00	0.49	33.99	16.69	17.30
	Georgia	17.45	6.00	11.50	5.00	0.49	40.44	18.79	21.65
	Kentucky	18.40	6.00	11.50	5.00	0.49	41.39	15.12	26.27
	Louisiana	12.64	6.00	11.50	5.00	0.49	35.63	23.08	12.55
	Mississippi	19.01	6.00	11.50	5.00	0.49	42.00	21.77	20.23
	North Carolina	13.19	6.00	11.50	5.00	0.49	36.18	18.69	17.49
	South Carolina	15.03	6.00	11.50	5.00	0.49	38.02	19.43	18.59
	Tennessee	12.15	6.00	11.50	5.00	0.49	35.14	17.18	17.96
	Average/Total	13.73	6.00	11.50	5.00	0.49	36.72	18.43	18.29
вс	Illinois	12.50	4.49	9.00	5.00	0.37	31.36	8.92	22.44
	Indiana	12.50	5.49	9.00	5.00	0.42	32.41	17.07	15.34
	Michigan	21.00	5.31	9.00	5.00	0.43	40.74	12.74	28.00
	Ohio	14.25	5.35	9.00	5.00	0.42	34.02	14.41	19.61
	Wisconsin	19.95	5.03	9.00	5.00	0.23	39.21	19.68	19.53
	California	10.97	4.40	9.00	5.00	0.44	29.81	11.68	18.13
	Connections	12.54	5.69	9.00	5.00	0.62	32.85	20.81	12.04
ŕ	Nevada	10.75	5.26	9.00	5.00	0.54	30.55	21.17	9.38
	Arkansas	31.95	5.20	9.00	5.00	0.48	51.63	16.57	35.06
	Kansas	14.45	5.20	9.00	5.00	0.48	34.13	16.39	17.74
	Missouri	16.90	5.20	9.00	5.00	0.48	36.58	19.37	17.21
	Oklahoma	12.28	5.20	9.00	5.00	0.48	31.96	18.45	13.51
	Texas	19.95	5.20	9.00	5.00	0.48	39.63	17.91	21.72
	Average/Total	14.88	4.93	9.00	5.00	0.44	34.25	14.50	19.76
	Avg. Ameritech	15.65	5.09	9.00	5.00	0.39	35.13	13.40	21.73
	Arizona	13.18	6.00	8.00	5.00	0.56	32.74	28.10	4.64
	Colorado	14.92	6.00	8.00	5.00	0.56	34.48	12.88	21.60
	ldaho	14.48	6.00	8.00	5.00	0.56	34.04	22.44	11.59
	lowa	11.68	4.72	8.00	5.00	0.56	29.96	17.15	12.81
	Minnesota	14.36	4.89	8.00	5.00	0.56	32.81	13.45	19.36
	Montana	16.73	6.00	8.00	5.00	0.56	36.29	27.34	8.95
	Nebraska	19.23	5.16	8.00	5.00	0.56	37.95	25.19	12.75
	New Mexico	10.66	6.00	8.00	5.00	0.56	30.22	21.74	8.48
	North Dakota	17.69	6.00	8.00	5.00	0.56	37.25	22.90	14.35
	Oregon	13.80	6.00	8.00	5.00	0.56	33.36	20.66	12.70
	South Dakota	16.65	6.00	8.00	5.00	0.56	36.21	23.54	12.67
	Utah	11.03	6.00	8.00	5.00	0.56	30.59	19.45	11.14
	Washington	12.50	5.92	8.00	5.00	0.56	31.98	10.72	21.26
	Wyoming	23.10	6.00	8.00	5.00	0.56	42.66	28.26	14.40
	Average/Total	13.75	5.75	8.00	5.00	0.56	33.06	18.33	14.73

#### Notes

Source: RRA, FCC, Public Service Commission of West Virginia, and UBS Warburg LLC estimates

<sup>(1)</sup> IntraLATA toll is captured in access and basic local service. Data gathered from company information and RRA.

<sup>(2)</sup> UNE-P rates include loop, switching port, 1000 MOU of switching and 200 MOU of shared transport & tandem switching each.

<sup>(3)</sup> Vertical services per line is an estimate based on RBOC data.

<sup>(4)</sup> Switched access revenue per line is based on 200 interstate MOU at \$0.005/min and 200 intrastate MOU at \$0.015/min.

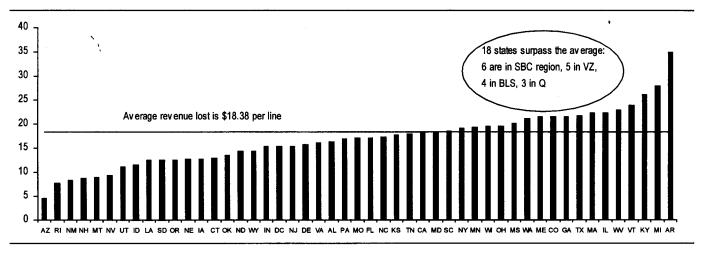
Table 6: Components of UNE-P Rates (per month per line)

							Tandom coulded to	g Shared transport	Avg. UNE-P		
		11-2	Loop	D		Switching	Tandem switching	•	(assume 80% urban,		
		<u>Urban</u>		Rural	per port		per MOU	per MOU	15% suburban, 5% rural)		
Z	Connecticut	8.95	12.03	19.69	3.31	0.0072	0.0020	na	20.81		
	DC	10.81	10.81	10.81	1.55	0.0030	0.0010	0.0015	15.87		
	Delaware	10.07	13.13	16.67	2.23	0.0028	0.0007	0.0001	16.03		
	Maryland	12.11	12.85	25.96	1.90	0.0038	0.0007	0.0004	18.82		
	New Jersey	8.12	9.59	10.92	0.73	0.0026	0.0013	0.0025	12.61		
	West Virginia	14.99	22.04	43.44	1.60	0.0072	0.0002	0.0007	26.50		
	Pennsylvania	10.25	11.00	14.00	2.67	0.0017	8000.0	0.0001	15.11		
	Virginia	10.74	16.45	29.40	1.30	0.0031	0.0006	0.0001	17.07		
	Maine	11.44	13.47	18.75	0.94	0.0017	0.0022	0.0009	15.34		
	Massachussetts	7.54	14.11	20.04	2.00	0.0033	0.0012	0.0022	15.09		
	New Hampshire	14.01	15.87	24.09	2.31	0.0079	0.0016	0.0010	25.54		
	New York `	7.70	11.31	15.51	2.57	0.0011	na	na	12.33		
	Rhode Island	11.19	15.44	19.13	1.86	0.0117	0.0012	0.0022	27.46		
						0.0040					
	Vermont	7.72	8.35	21.63	1.03		0.0009	0.0006	13.85		
	Average	9.34	12.33	18.16	1.98	0.0026	0.0007	0.0008	15.10		
LS	Alabama	15.24	24.75	44.85	2.07	0.0020	0.0015	0.0015	22.82		
	Florida	12.79	17.27	33.36	1.40	0.0008	0.0002	0.0000	16.69		
	Georgia	14.21	16.41	26.08	1.85	0.0016	0.0007	0.0002	18.79		
	Kentucky	10.56	15.34	31.11	1.49	0.0012	0.0002	0.0004	15.12		
	Louisiana	14.05	24.14	49.30	2.55	0.0021	0.0008	0.0047	23.08		
	Mississippi	15.58	20.65	29.51	2.11	0.0024	0.0008	0.0004	21.77		
	North Carolina	12.11	21.24	33.65	2.19	0.0017	0.0009	0.0003	18.69		
	South Carolina	14.94	21.39	26.72	1.65	0.0011	0.0007	0.0005	19.43		
	Tennessee	13.19	17.23	22.53	1.89	0.0008	0.0010	0.0001	17.18		
	Average	13.26	18.96	32.77	1.79	0.0013	0.0006	0.0006	18.43		
D.C.	Minaia	0.50	7.07	44.40	E 04	limeta - d	0.0000	0.0000	9.00		
ВС	Illinois	2.59	7.07	11.40	5.01	unlimited	0.0002	0.0008	8.92		
	Indiana	8.03	8.15	8.99	5.34	0.0034	0.0003	0.0007	17.07		
	Michigan	8.47	8.73	12.54	2.53	0.0012	0.0011	0.0004	12.74		
;	Ohio	5.93	7.97	9.52	4.63	0.0032	0.0007	na	14.41		
	Wisconsin	10.90	10.90	10.90	4.98	0.0035	0.0007	0.0011	19.68		
	California	8.83	11.27	19.63	0.88	0.0008	0.0001	0.0013	11.68		
	Connecticut	8.95	12.03	19.69	3.31	0.0072	0.0020	na	20.81		
	Nevada	11.75	22.66	66.31	1.63	0.0016	0.0018	0.0073	21.17		
	Arkansas	11.86	13.64	23.34	1.61	0.0018	0.0017	0.0004	16.57		
	Kansas	11.86	13.64	23.34	1.61	0.0018	0.0008	0.0004	16.39		
	Missouri	12.71	20.71	33.29	2.06	0.0021	0.0008	0.0004	19.37		
	Oklahoma	12.14	13.65	26.25	2.32	0.0029	0.0010	na	18.45		
	Texas	12.14	13.65	18.98	2.90	0.0021	0.0008	0.0001	17.91		
	Average	8.85	11.32	18.01	2.73	0.0018	0.0006	0.0008	14.50		
	Avg. Ameritech	6.37	8.21	10.79	4.38	0.0019	0.0006	0.0005	13.40		
1	Arizona	18.96	34.94	56.53	1.61	0.0028	0.0014	0.0009	28.10		
•	Colorado	5.91	34.94 12.31	32.79	1.86	0.0028	0.0014	0.0009	12.88		
	Idaho	15.81	24.01	40.92	1.34	0.0017	0.0032	0.0022	22.44		
	lowa	13.11	15.64	27.27	1.15	0.0007	0.0042	0.0013	17.15		
	Minnesota	8.81	12.33	21.91	1.08	0.0018	0.0013	0.0015	13.45		
	Montana	23.10	23.90	27.13	1.58	0.0007	0.0068	0.0015	27.34		
	Nebraska	15.14	35.05	77.92	2.47	0.0007	0.0026	0.0012	25.19		
	New Mexico	17.75	20.30	26.23	1.38	0.0011	0.0016	0.0019	21.74		
	North Dakota	14.78	24.92	56.44	1.27	0.0007	0.0084	0.0044	22.90		
	Oregon	13.95	25.20	56.21	1.26	0.0013	0.0016	0.0000	20.66		
	South Dakota	17.01	18.54	24.37	1.84	0.0035	0.0017	0.0014	23.54		
	Utah	14.77	17.76	20.29	0.94	0.0026	0.0011	0.0009	19.45		
	Washington	6.41	11.35	12.76	1.34	0.0012	0.0014	0.0022	10.72		
	Wyoming	19.91	26.94	30.13	2.64	0.0038	0.0016	0.0003	28.26		
	Average	12.17	19.86	34.72	1.46	0.0017	0.0020	0.0014	18.33		
	Average	10.28	14.15	23.04	2.19	0.0019	0.0008	0.0008	15.91		

Source: RRA, FCC, Public Service Commission of West Virginia, and UBS Warburg LLC estimates

AT&T's ability to take revenue from Bells, based on its current local footprint, is strongest in MI, OH, and CA The average monthly bill less the wholesale UNE-P rate is the revenue lost per line. Each Bell has states where the loss of a line is more painful than in others. For instance, Verizon loses approximately \$7.89 per month per line in Rhode Island but more than \$20 per line in Massachusetts, West Virginia, Maine, and Vermont. We estimate that Bells will lose roughly \$18.38 per line to UNE-P. AT&T's ability to take revenue from a Bell's pocket, based on its current local service footprint, is strongest in Michigan, which gives up \$28.00 per month; Ohio, at \$19.61; and California, at \$18.13 per month in lost revenue per line—all SBC states.

Chart 4: Local Residential Revenue per Line Lost to UNE-P



Source: Company reports and UBS Warburg LLC estimates

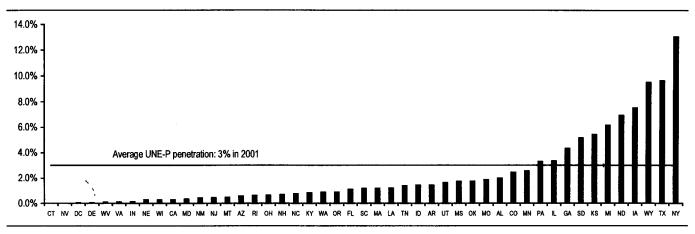
To estimate the revenue impact for each Bell, we need to make assumptions for line loss within each state. Importantly, the lost revenue we site above for each line lost does not include the lost opportunity to sell long distance and other services to these customers. A lost residential line often means a lost opportunity to sell long distance service, which typically produces \$14-15 per month per line in incremental revenues (the Bells, to date, typically produce monthly long distance revenues of \$12-13 per subscriber per month). Bundling opportunities with DSL and wireless also are forfeited. Additionally, UNE-P based competition can also provide the incumbent with the incentive to lower overall residential pricing, as was the case in Michigan, where SBC recently lowered basic service rates.

#### **Estimating Line Loss**

Based on FCC data, the ILECs provided roughly 5.8 million lines to UNE-P in 2001, up from 4.8 million in 2000. This corresponds to roughly 3% of the 192 million local loops in the United States versus 1.5% in 2000. New York and Texas have the highest UNE-P penetration rates, at 13.1% and 9.6%, respectively.

We expect UNE-P lines to grow by 5.5 million in 2002 to a base of 11.1 million and by 6.9 million to 12.1% of lines in 2003. We expect SBC to continue losing the highest amount of retail lines, adding an additional 3.4 million to its UNE-P base in 2003, totaling to more than 16.5% of its subscriber base. Incremental UNE-P adds should peak in 2003 and start declining in the outer years. However we believe SBC and BellSouth will lose more than 20% of their retail lines to UNE-P competition in the next couple of years.

Chart 5: UNE-P Penetration by State in 2001



Source: FCC and UBS Warburg LLC

Table 7: UNE-P Penetration of Total Switched Access Line Base

	1Q01	2Q01	3Q01	4Q01	1Q02	2Q02	3Q02e	4Q02e	2000	2001	2002e	2003e	2004e	2005e	<u>2006e</u>
<b>Total Switched Acces</b>	s Lines														
SBC	61,254	60,578	60,230	59,532	59,036	58,255	57,325	56,345	61,270	59,532	56,345	54,349	53,676	53,271	53,213
VZ	62,903	62,465	61,967	61,551	61,227	60,373	58,027	57,276	62,902	61,551	57,276	55,131	54,129	53,972	54,001
BLS	25,898	25,666	25,575	25,422	25,425	25,138	24,837	24,612	25,908	25,422	24,612	24,080	23,920	23,776	23,641
Q	17,929	17,808	17,687	17,454	17,250	16,955	16,730	16,531	18,089	17,454	16,531	15,686	15,072	14,611	14,289
Total	167,984	166,517	165,459	163,959	162,938	160,721	156,920	154,764	168,169	163,959	154,764	149,246	146,797	145,630	145,144
% growth									÷						
SBC	0.2%	-1.1%	-1.7%	-2.8%	-3.6%	-3.8%	-4.8%	-5.4%	0.9%	-2.8%	-5.4%	-3.5%	-1.2%	-0.8%	-0.1%
VZ	0.6%	-0.4%	-1.4%	-2.1%	-2.7%	-3.3%	-6.4%	-6.9%	1.4%	-2.1%	-6.9%	-3.7%	-1.8%	-0.3%	0.1%
BLS	0.1%	-0.8%	-1.4%	-1.9%	-1.8%	-2.1%	-2.9%	-3.2%	sec 1.6%	-1.9%	-3.2%	-2.2%	-0.7%	-0.6%	-0.6%
Q	0.1%	-0.8%	-1.9%	-3.5%	-3.8%	-4.8%	-5.4%	-5.3%	1.9%	-3.5%	-5.3%	-5.1%	-3.9%	-3.1%	-2.2%
Total	0.3%	-0.7%	-1.6%	-2.5%	-3.0%	-3.5%	-5.2%	-5.6%	1.3%	-2.5%	-5.6%	-3.6%	-1.6%	-0.8%	-0.3%
Total UNE-P															
SBC	1,373	1,760	2,159	2,403	2,761	3,453	4,453	5,653	1,012	2,403	5,653	9,067	10,798	11,852	12,486
VZ	1,645	2,093	2,138	2,195	2,259	2,369	2,599	3,099	1,687	2,195	3,099	4,899	6,299	7,299	8,049
BLS	303	385	505	601	840	1,118	1,418	1,818	224	601	1,818	3,318	4,218	4,818	5,218
Q	431	451	459	453	491	512	547	582	na	453	582	862	1,052	1,167	1,272
Total	3,752	4,689	5,261	5,652	6,351	7,452	9,017	11,152	2,923	5,652	11,152	18,146	22,367	25,136	27,025
Net UNE-P Adds															
SBC	361	. 387	399	244	358	692	1,000	1,200	na	1,391	3,250	3,414	1,731	1,055	634
VZ	-42	448	45	57	64	110	230	500	na	508	904	1,800	1,400	1,000	750
BLS	79	82	120	96	239	278	300	400	na	377	1,217	1,500	900	600	400
Q	na	20	8	-6	38	21	35	35	na	na	129	280	190	115	105
Total	398	937	572	391	699	1,101	1,565	2,135	na	2,276	5,500	6,994	4,221	2,770	1,889
UNE-P Penetration															
SBC	2.2%	2.9%	3.6%	4.0%	4.7%	5.9%	7.8%	10.0%	1.7%	4.0%	10.0%	16.7%	20.1%	22.2%	23.5%
VZ	2.6%	3.4%	3.5%	3.6%	3.7%	3.9%	4.5%	5.4%	2.7%	3.6%	5.4%	8.9%	11.6%	13.5%	14.9%
BLS	1.2%	1.5%	2.0%	2.4%	3.3%	4.4%	5.7%	7.4%	0.9%	2.4%	7.4%	13.8%	17.6%	20.3%	22.1%
Q	2.4%	2.5%	2.6%	2.6%	2.8%	3.0%	3.3%	3.5%	na	2.6%	3.5%	5.5%	7.0%	8.0%	8.9%
Total	2.2%	2.8%	3.2%	3.4%	3.9%	4.6%	5.7%	7.2%	1.7%	3.4%	7.2%	12.2%	15.2%	17.3%	18.6%

Source: Company report s and UBS Warburg LLC estimates

#### Now for the Bad News: Negative Leverage

We believe UNE-P lines generate negative EBITDA for the Bells in 18 states We believe residential lines converted to wholesale through the use of UNE-P generate negative EBITDA in 18 states in the United States. In assessing this, we first looked at the Bells' cost structure in terms of cost of goods sold (COGS) and SG&A on a retail basis. We believe COGS represent approximately 27% of residential local sales for BellSouth, 31% for Verizon, and 35% for SBC and Qwest. SG&A as a percentage of sales range from 23% for BellSouth to 25% for SBC, bringing EBITDA margins at approximately 40-50% of sales.

We believe there is very little avoided operating or capital cost for the Bells with UNE-P We believe there is very little avoided cost within the COGS line of a Bell's P&L as it relates to residential lines. The incumbent still has to perform maintenance on the lines being resold by its competitors. Meanwhile, the incumbent can not reduce the number of central offices that it needs to staff and maintain despite the loss of, for example, 5-10% of the lines in a specific central office. There are likely to be some minor reductions related to lower costs for directory assistance and voice mail, neither of which need to be provided on a wholesale basis. In our analysis, we assumed wholesale COGS represent 95% of the dollar value of COGS per retail line.

The situation is only slightly better within the SG&A line. We believe the RBOCs will be able to reduce SG&A-related costs, as the competing reseller is responsible for the billing and customer service of its subscribers. We estimate that these expenses equate to roughly 20% of total SG&A dollars spent and, therefore, reduce this line item by a similar amount. However, the situation may actually be worse than the scenario we have contemplated in our model, as the Bells have initiated "winback" programs to offset the impact of line losses to UNE-P based competitors, potentially pushing up SG&A as a percentage of sales over the longer term.

**Table 8: Cost Structure Assumptions and Resulting Wholesale Margins** 

	COGS (% of sales)	S,G&A (% of sales)	EBITDA margins	% of COGS avoided	% of S,G&A avoided
SBC	35%	25%	40%	5%	20%
VZ	31%	24%	45%	5%	20%
BLS	27%	23%	50%	5%	20%

Source: UBS Warburg LLC estimates

For every \$1.00 in revenue lost to UNE-P, the Bells lose \$0.70-0.85 of EBITDA and \$0.45-0.60 of after-tax OpFCF

Ramifications for return on invested capital are striking, as we also believe there is little avoided capital cost associated with UNE-P based competition. Again, the incumbents remain responsible for the care and maintenance of the network infrastructure. Therefore, for every \$1 in revenue lost to UNE-P based competition, the Bells lose \$0.70-0.85 of EBITDA and \$0.45-0.60 of after-tax operating cash flow (EBITDA less capex). Our analysis suggests that all the states in the Ameritech region, except for Indiana, produce negative EBITDA on a wholesale basis. Three of Verizon's biggest states, New York, New Jersey, and Massachusetts, contribute negative EBITDA on a wholesale basis.

We conducted some sensitivity analysis on our expectations for avoided cost. We believe the 5% of cost avoidance in the COGS line to include little variability. However, we may be overestimating avoidable cost within our assumption for 20% cost avoidance within the Bells' SG&A. The Bells suffering line loss have initiated aggressive win-back programs that bring additional costs and need to be factored in. Until this point, the carriers did very little direct marketing for local service. To assess the impact to changes in our assumptions, we looked at the effects on EBITDA per wholesale line and the number of states producing negative EBITDA per wholesale line using 15%, 10%, and 5% in avoided cost. A change from 20% to 5% removed roughly \$1.13 per line in EBITDA on average—not a terribly large swing. However, the number of states that produce negative EBITDA per line on a wholesale basis jumped 33% to 24.

Table 9: Sensitivity Analysis of Change in Cost Avoidance on Wholesale Profitability

Assumption for		Avg. EBITD	A per line	mo. (\$)		No. of	States w	ith Negat	ive EBI	TDA
S,G&A avoidance	SBC	<u> </u>	<u>BLS</u>	Q	<u>Total</u>	SBC	<u>VZ</u>	<u>BLS</u>	Q	<u>Total</u>
20%	-3.51	-0.68	2.47	1.03	-1.11	8	6	1	3	18
15%	-3.93	-1.06	2.05	0.62	-1.41	10	6	1	3	20
10%	-4.36	-1.45	1.63	0.21	-1.82	10	6	1	3	20
5%	-4.78	-1.84	1.22	-0.19	-2.24	10	9	2	3	24

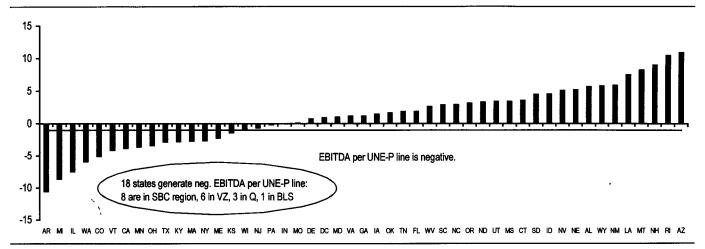
Source: UBS Warburg LLC estimates

Table 10: Profitability of Residential Local Service—Retail Versus Wholesale

		COGS	etail P	rofitability S,G&A exp.		Who	olesale	Profitability					
		(% of sales: VZ 31%	Gross	(% of sales: VZ 24%		cogs	Gross	S,G&A exp.		EBITDA	EBITDA Losti	FCF	FCF Lost/
		BLS 27%, SBC 35%)	Profit	BLS 23%, SBC 25%)	EBITDA	95% of ret. COGS	Profit	80% of ret. S,G&A	EBITDA	lost	Revenue Lost	iost	Revenue Los
<u> </u>	Connecticut	10.27	22.85	7.95	14.90	9.75	11.05	6.36	4.69	10.21	79%	6.75	52%
	DC	9.50	21.15	7.36	13.79	9.03	6.84	5.88	0.96	12.84	84%	8.48	55%
	Delaware	9.70	21.59	7.51	14.08	9.21	6.81	6.01	0.80	13.28	84%	8.77	55%
	Maryland	11.32	25.19	8.76	16.43	10.75	8.07	7.01	1.06	15.37	84%	10.15	56%
	New Jersey	8.52	18.95	6.59	12.36	8.09	4.52	5.27	-0.75	13.11	85%	8.67	56%
	West Virginia	15.19	33.81	11.76	22.05	14.43	12.07	9.41	2.66	19.39	84%	12.81	56%
	Pennsylvania	9.80	21.81	7.59	14.22	9.31	5.81	6.07	-0.26	14.49	85%	9.57	56%
	Virginia	10.12	22.52	7.83	14.69	9.61	7.45	6.27	1.19	13.50	84%	8.92	55%
	Maine	11.27	25.08	8.72	16.36	10.70	4.64	6.98	-2.34	18.69	87%	12.35	57%
	Massachusetts	11.42	25.43	8.84	16.58	10.85	4.24	7.08	-2.84	19.42	87%	12.83	57%
	New Hampshire	10.50	23.36	8.13	15.23	9.97	15.57	6.50	9.07	6.17	69%	<b>4.08</b>	46%
	New York	9.62	21.42	7.45	13.97	9.14	3.19	5.96	-2.77	16.74	87%	11.06	57%
	Rhode Island	10.78	24.00	8.35	15.65	10.24	17.22	6.68	10.54	5.11	65%	3.38	43%
	Vermont	11.53	25.67	8.93	16.74	10.96	2.89	7.14	-4.25	20.99	88%	13.87	58%
	Average/Total	10.05	22.37	7.78	14.59	9.55	5.55	6.22	-0.68	15.26	85%	10.09	56%
LS	Alabama	10.48	28.32	8.92	19.40	9.95	12.86	7.14	5.73	13.67	83%	9.04	55%
	Florida	9.05	24.46	7.71	16.75	8.59	8.10	6.16	1.93	14.82	86%	9.79	57%
	Georgia	10.79	29.16	9.19	19.98	10.25	8.55	7.35	1.20	18.78	87%	12.41	57%
	Kentucky	11.04	29.86	9.41	20.45	10.49	4.63	7.53	-2.89	23.34	89%	15.43	59%
	Louisiana	9.49	25.65	8.08	17.57	9.01	14.06	6.47	7.60	9.97	79%	6.59	52%
	Mississippi	11.21	30.30	9.55	20.76	10.65	11.12	7.64	3.48	17.27	85%	11.41	56%
	North Carolina	9.64	26.05	8.21	17.85	9.15	9.54	6.57	2.97	14.87	85%	9.83	56%
	South Carolina	10.13	27.40	8.63	18.77	9.63	9.80	6.91	2.89	15.87	85%	10.49	56%
	Tennessee	9.36	25.29	7.97	17.33	8.89	8.29	6.38	1.91	15.41	86%	10.18	57%
	Average/Total	9.78	26.45	8.33	18.12	9.29	9.13	6.67	2.47	15.65	85%	10.34	57%
вс	Ilfinois	10.85	20.14	7.75	12.40	10.30	-1.39	6.20	-7.58	19.98	89%	13.39	60%
	Indiana	11.20	20.79	8.00	12.80	10.64	6.44	6.40	0.04	12.76	83%	8.55	56%
	Michigan	14.11	26.20	10.08	16.12	13.40	-0.67	8.06	-8.73	24.85	89%	16.65	59%
	Ohio	11.76	21.84	8.40	13.44	11.17	3.24	6.72	-3.48	16.92	86%	11.34	58%
	Wisconsin	13.64	25.34	9.75	15.59	12.96	6.72	7.80	-1.08	16.67	85%	11.17	57%
	California	10.28	19.09	7.34	11.75	9.77	1.91	5.87	-3.96	15.71	87%	10.52	58%
		11.28	20.95	8.06	12.89	10.72	10.09	6.45	3.64	9.25	77%	6.20	51%
	, Connecticut Nevada	10.50	19.51	7.50	12.00	9.98	11.19	6.00	5.19	6.82	73%	4.57	49%
												20.86	59%
	Arkansas	17.90	33.25	12.79	20.46	17.01	-0.44	10.23 6.73	-10.67	31.13 14.99	89% 84%	10.04	57%
	Kansas	11.78	21.87	8.41	13.46	11.19	5.20	7.22	-1.53 0.14	14.99	83%	9.58	56%
	Missouri	12.64	23.47	9.03	14.44	12.00	7.36		0.14			7.31	54%
	Oklahoma	11.02	20.46	7.87	12.59	10.47	7.98	6.30	1.68	10.91	81%		
	Texas	13.70	25.45	9.79	15.66	13.02	4.89	7.83	-2.94	18.60	86%	12.46	57%
	Average/Total	11.83	21.98	8.45	13.53	11.24	3.25	6.76 6.95	-3.51	17.04 18.99	86% 87%	11.41 12.73	58% 59%
	Avg. Ameritech	12.16	22.58	8.69	13.90	11.55	1.85	6.83	-5.10	16.99	0/76	12./3	<b>39</b> 76
	Arizona	11.26	20.92	8.05	12.87	10.70	17.40	6.44	10.97	1.91	41%	1.05	23%
	Colorado	11.87	22.05	8.48	13.57	11.28	1.60	6.78	-5.19	18.75	87%	10.31	48%
	ldaho	11.72	21.76	8.37	13.39	11.13	11.31	6.70	4.62	8.77	76%	4.83	42%
	lowa	10.29	19.11	7.35	11.76	9.78	7.38	5.88	1.50	10.26	80%	5.64	44%
	Minnesota	11.29	20.96	8.06	12.90	10.72	2.72	6.45	-3.73	16.63	86%	9.14	47%
	Montana	12.51	23.22	8.93	14.29	11.88	15.46	7.15	8.32	5.97	67%	3.29	37%
	Nebraska	13.08	24.30	9.35	14.95	12.43	12.76	7.48	5.29	9.67	76%	5.32	42%
	New Mexico	10.38	19.28	7.42	11.86	9.86	11.88	5.93	5.95	5.91	70%	3.25	38%
	North Dakota	12.84	23.85	9.17	14.68	12.20	10.70	7.34	3.36	11.31	79%	6.22	43%
	Oregon	11.48	21.32	8.20	13.12	10.91	9.75	6,56	3.19	9.93	78%	5.46	43%
	South Dakota	12.48	23.17	8.91	14.26	11.85	11.69	7.13	4.56	9.70	77%	5.33	42%
	Utah	10.51	19.52	7.51	12.01	9.98	9.46	6.01	3.46	8.56	77%	4.71	42%
	Washington	11.00	20.42	7.86	12.57	10.45	0.28	6.28	-6.01	18.57	87%	10.22	48%
	Wyoming	14.74	27.37	10.53	16.84	14.00	14.26	8.42	5.84	11.00	76%	6.05	42%
	Average/Total	11.38	21.13	8.13	13.00	10.81	7.53	6.50	1.03	11.98	81%	6.59	45%
IS	Average/Total	10.89	22.90	8.21	14.69	10.34	5.57	6.57	-1.00	15.69	85%	10.28	56%

Source: UBS Warburg LLC estimates

Chart 6: Average EBITDA per UNE-P Line Across U.S. is Negative



Source: Company reports and UBS Warburg LLC estimates

For every eight million UNE-P lines, the Bells will lose \$1 billion in annualized OpFCF

Given the above assumptions (including the assumption for a blended \$10.3 in lost free cash flow per line) and working backward, we estimate that the Bells see a \$1 billion reduction in annualized operating free cash flow for every eight million lines lost to UNE-P based competition, all else being equal. To highlight the risks we foresee for the Bells, we currently expect SBC to lose roughly one million access lines to UNE-P in the third quarter after losing almost 700,000 in the second quarter, a combined annualized impact of approximately \$140 million in after-tax operating free cash flow.

#### **Long Distance: Partial Offset**

The ability to penetrate the residential long distance market provides the Bells with the opportunity to offset the effects of retail line loss to UNE-P. Aggressive competition in the long distance market and the migration to wireless calling has hurt the economics of long distance service while local service largely has been shielded from competition. Therefore, the economics of UNE-P have made the trade-off of long distance approval for local service competition envisioned by the Telecom Act less attractive than previously believed.

To offset the revenue impact, the Bells need to add roughly 1.3 LD subscribers for each local line lost As of the second quarter of 2002, the Bells had more long distance subscribers than local lines lost to UNE-P based competition. The Bells had 10.2 million long distance subscribers, representing roughly 6.3% of the total access line base, versus 7.5 million UNE-P lines, representing 4.6% of the total access lines. By the end of 2005, we believe the Bells will penetrate more than 31% of the total access lines, with long distance service versus losing 17% of the base to UNE-P competition.

FCC data suggest that the average household spent \$23 per month on long distance in 1998, \$21 in 1999, and \$18 in 2000. Based on a similar rate of decline, this is likely to fall to \$14-15 per month for 2002. Early results suggest the Bells are attracting subscribers that fall just below this range. We calculate that SBC and Verizon have interLATA revenue per line of \$12-13 per month. Based on our analysis, we believe the Bells need to add 1.3 long distance subscribers for each local line lost—not a big challenge, to offset the revenue effect of UNE-P based competition with long distance.

...however, they will need to add 5.4 LD customers for every local line lost just to break even at the EBITDA line However, UNE-P is an EBITDA story for the Bells. The difference in the profitability of these two services makes the EBITDA impact more severe. We believe the Bells will earn EBITDA margins of about 20% three years out, once their interLATA businesses have had time to gain scale. This compares with the 40-50% margins earned in the local service segment. Based on our analysis that shows the Bells will lose \$15.69 in monthly EBITDA for each line lost to UNE-P competition, we believe they need to add 5.4 long distance subscribers for every line lost to UNE-P to break even. This translates into 135 million long distance subscribers, or more than 90% penetration of its base by 2005. While long distance may appear to largely offset the impact of UNE-P on the top line once the Section 271 process runs its course, it will be difficult to offset the margin pressure likely to result from this trade-off.

**Table 11: Partial Offset from Long Distance** 

	<u>2002e</u>	2003e	2004e	<u>2005e</u>
LD subs	19,905	34,524	41,460	45,223
UNE-P subs	11,152	18,146	22,367	25,136
LD subs / UNE-P subs	1.8	1.9	1.9	1.8
Monthly LD revenue	12.54	13.17	13.82	14.51
% growth	na	5%	5%	5%
LD / UNE-P sub ratio to offset revenue loss	1.5	1.4	1.3	1.3
Monthly LD EBITDA	-1.25	0.66	1.38	2.90
% margins	-10%	5%	10%	20%
LD / UNE-P sub ratio to offset EBITDA loss	nm	23.8	11.4	5.4
Incremental LD revenues	\$1,136	\$1,788	\$1,656	\$827
Revenue lost to UNE-P	548	1,088	895	462
Net revenue impact	588	700	761	365
Incremental LD EBITDA	-\$114	\$89	\$166	\$165
EBITDA lost to UNE-P	472	938	770	397
Net EBITDA impact	-586	-848	-604	-231

Source: UBS Warburg LLC estimates

# **Hold the Line**

#### Which States are Vulnerable?

Now that we have assessed the economic impact of UNE-P on a per-state basis, we need to assess the potential for line loss among the four regional Bells. Competitive entry by UNE-P based resellers is impacted by five factors:

- High retail rates for basic local service.
- Low rates for the unbundled network element platform.
- Low/no one-time charges related to hot cuts/new service initiation.
- A large percentage of urban lines.
- A slow Section 271 approval process.

High retail rates, combined with low wholesale rates for use of the platform, create the best environment for UNE-P based competition, increasing the dollar amount of gross margin earned on a per-line basis. In this analysis, we looked at the current retail price for unlimited local calling plus three calling features to determine the retail price. (This is a departure from the RBOC-based analysis, where we assumed less than 100% penetration of calling features within lines lost to resellers—Bells will lose some lines that do not have calling features while competitors will only sell lines with calling features included.)

Top 20 states with 20 lowest states the highest basic for UNE-P rates local rates Álabama, Georgia, Maryland, Missouri, California, Colorado, DC Arkansas, Mississippi, Montana, Delaware, Kansas, New Kentucky, North Dakota, York, New Jersey, Massachusetts, Nebraska, South Pennsylvania, Virginia, Maine, Vermont Dakota, Texas, West Washington, Minnesota Virginia, Wyoming, South Carolina Michigan Wisconsin Illinois, Florida, Ohio Indiana, Tennessee States which will not have 271 Relief until 2003

**Chart 7: Most Vulnerable States** 

Source: UBS Warburg LLC

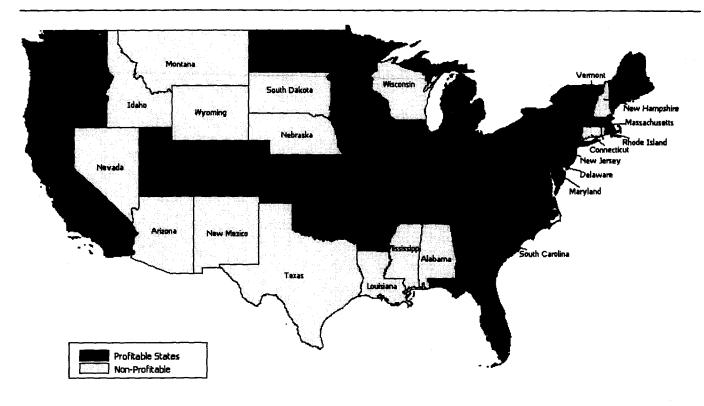
We believe UNE-P based competitors can generate gross margins of greater than 45% in 33 states

Based on this analysis, we believe UNE-P based competitors can generate gross margins of greater than 45% in 33 states, more than the 14-17 states identified by AT&T where discounts hit this threshold. However, our analysis omits the effects of one-time charges the Bells may impose for hot cuts that may effect the economics. These fees are being reduced by the public utility commissions (PUCs) and will have less of an impact in the future. Margins on a percentage basis are most attractive for competitors within the Ameritech region of SBC territory and lowest within BellSouth territory.

The urban/rural line mix also effects the attractiveness of each state for UNE-P competitors. UNE-P economics are best in urban markets where wholesale rates for the local loop are the lowest. In rural markets, the wholesale loops are typically twice the price of urban loops. This differential is highest within Qwest territory, where the weighted average rural loop is roughly three times the price of an urban loop. While UNE-P based competitors focus their marketing efforts on urban markets, they have to accept customers from suburban and rural markets, as well. A large percentage of rural lines in a state make it more likely that customers with poor economics will show up at the resellers' doorsteps. Large urban markets also assure greater "bang for the buck" in terms of marketing costs.

To go along with its large rural/urban loop differential, Qwest also has the largest percentage of rural lines and is the only regional Bell where AT&T has not set up shop, despite the large gross margins to be earned in many of its states. Considering Qwest's financial position and poor history of customer service, AT&T may find it is winning customers it did not intend to win in many of these areas.

Chart 8: UNE-P Profitable for Competitors in 33 States



Source: UBS Warburg LLC estimates

Finally, the Section 271 timeline also effects the attractiveness of a state regarding local competition, specifically for AT&T and WorldCom. These carriers have targeted pre-271 states to lock in existing long distance customers and lower churn in anticipation of RBOC approval. The Bells claim to have stemmed residential revenue loss in states that have received long distance approval. While lines continue to fall, the Bells are able to increase revenue per line through rapid penetration of interLATA services. Aggressive marketing of all distance bundles and win-back also appears to have kept pressure on UNE-P based line growth in approved states. For instance, SBC has stated that it has achieved win-back rates of 50% in states where it offers long distance services along with local.

At this point, the Bells have approval to offer interLATA services to 31% of their total switched access lines, with another 34% expected by the end of the year. Verizon is the leader, with 75% of its lines approved, and SBC follows with 32% certification. We expect Verizon and Qwest to have 100% of their lines approved by year-end, and SBC to reach 63% after adding California and Nevada in the fourth quarter. We believe BellSouth will end 2002 with roughly 60% certification, awaiting approvals in Tennessee and Florida in 2003. We believe higher long distance approval rates will help slow the penetration of UNE-P lines nationally.

Based on these criteria, the most attractive region for local competition based on UNE-P is the Ameritech portion of SBC. Retail rates are among the highest in the country and wholesale rates are relatively low based on terms agreed to in SBC's

Chart 9: Long Distance Relief Map

Source: FCC

SBC has lost more retail lines to UNE-P than any other Bell at 3.45 million

#### SBC—in the UNE-P Wheelhouse

SBC has lost more retail lines to UNE-P than any other Bell, at 3.45 million, including 692,000 in the second quarter alone. The 692,000 UNE-P lines equate to 1.27% of SBC's 54.8 million total retail access lines at the end of the first quarter while the imbedded base equates to 5.9% of the company's total switched lines (including wholesale). In the second quarter, SBC added 494,000 residential UNE-P lines, representing more than 51% of the loss in the retail residential line base. Second line losses accounted for another 26% of retail residential line losses while management suggested seasonality contributed the bulk of the remainder.

Table 12: Access Lines Statistics for SBC (000s)

	1Q01	2Q01	3Q01	4Q01	1Q02	2Q02
Total access lines	61,254	60,578	60,230	59,532	59,036	58,255
% growth	-2.5%	-3.7%	<b>-4</b> .0%	-4.7%	-5.0%	-4.7%
Net Adds	-16	-676	-348	-698	-496	-781
UNE-P	1,373	1,760	2,159	2,403	2,761	3,453
Net Adds	361	387	399	244	358	692
% of total lines	2.2%	2.9%	3.6%	4.0%	4.7%	5.9%
Retail residential lines	35,878	35,255	34,946	34,518	34,129	33,168
% growth	-2.6%	-3.7%	-3.8%	-4.3%	-4.9%	-5.9%
Net Adds	-200	-623	-309	-428	-389	-961
Residential UNE-P	70	94	89	92	162	656
Net Adds	-6	24	-5	3	70	494
% of res lines lost	-3.0%	3.9%	-1.6%	0.6%	17.9%	51.4%

Source: UBS Warburg LLC estimates

We believe SBC has the most attractive region for UNE-P providers. The average monthly bill for local service is among the highest while its UNE-P rates are the lowest, making it relatively easy for competitors to earn decent margins. This is especially true in the Ameritech region. Ameritech and California also have a large number of dense urban areas with very low loop rates that provide ample feeding ground for resellers.

SBC takes the hardest hit for retail lines lost to UNE-P-\$19.76 in revenues and \$17.04 in EBITDA per line

Based on our analysis, SBC also takes the hardest hit for each retail line lost to UNE-P competitors. We estimate that the company loses approximately \$19.76 in net revenue per line per month for each retail line lost to competitors. This compares with \$17.89 for Verizon, \$18.29 for BellSouth, and \$14.73 for Owest. In the Ameritech region, where the company is under full scale attack, it loses approximately \$21.73 per line per month in net revenue. The EBITDA impact is also most severe at SBC. We believe the company generates more than \$13.53 in EBITDA per retail residential line per month but loses roughly \$3.51 in EBITDA per month on lines converted to wholesale via UNE-P. SBC is the only Bell to generate more than \$1.00 of negative EBITDA per month on its wholesale line base. Therefore, the negative EBITDA swing from retail to wholesale is more than \$17.00 per line per month, also the largest of the Bells, with the other three in the minus \$12 to minus \$16 range. In the Ameritech region, this figure is approximately minus \$19.00 per line.

AT&T claims to have garnered 6% residential market share in Michigan in six months

We expect SBC to lose one million retail lines to UNE-P in the third quarter of 2002

By year-end 2002, 10% of SBC's total access lines will be UNE-P

The CA PUC is expected to vote on Section 271 approval for SBC in the state on September 19

Line losses to UNE-P have shifted from the business to the residential market. In the second quarter, UNE-P took 494,000 residential lines and just 117,000 business lines, down from 393,000 business lines in the first quarter. Michigan was hit hardest, with 184,000 lines converted from retail to wholesale in the state during the second quarter. AT&T, which began marketing in January 2002, claims to have garnered 6% residential market share in Michigan in six months. Texas has seen the largest total line loss to date from UNE-P, with more than 1.57 million wholesale lines (both UNE-P and TSR) in the state. Wholesale net adds have slowed dramatically in Texas, however, as AT&T has pulled back on its marketing efforts because of relatively low discounts available.

We expect line loss to continue ramping up in SBC territory in the second half of 2002 and believe the company will lose approximately one million retail lines to UNE-P in the third quarter. We believe roughly one-half of the line loss in the second quarter occurred in June. Considering the steep growth in the second quarter and AT&T's entry into Ohio and Illinois in mid-June and California in early August, our numbers could prove conservative. With another 1.2 million UNE-P lines projected for the fourth quarter, we now expect residential line loss of 9.1% and 12.6% in the third and fourth quarter, respectively. This also suggests that by year-end, 10% of total switched access lines will be UNE-P. Again, our analysis suggests that wholesale lines generate negative EBITDA on a weighted average basis. In 2003, we expect the company to lose 3.41 million lines, up from 3.25 million for all of 2002.

Much depends on the company's ability to secure long distance approval in California in the near term, which should dampen (but by no means eliminate) line loss while helping offset much of the revenue loss, similar to the results in 271-approved Southwestern Bell states. The Administrative Law Judge in California has approved the company's application and the full PUC is expected to vote on September 19, a short delay from the recently proposed date of August 22. A positive outcome for the Bell could enable SBC to begin marketing interLATA services in California in late December. However, Ameritech is a different story, as we do not expect the company to receive approval for long distance in these states until the second half of 2003.

#### **Estimates and Valuation**

Based on changes to our model resulting from this analysis, we are reducing our 2003 EPS estimate for SBC to \$2.25 from \$2.36 while maintaining our 2002 EPS estimate of \$2.31. This translates to a 2.3% decline in EPS in 2003 versus our previous estimate for 2.1% growth. It compares unfavorably with the 1.8% EPS decline we continue to expect for 2002. We now expect total proportionate revenues to decline 1.3% in 2003 following the 3.9% decline in 2002. Our previous estimate suggested 1.1% growth in revenues. Now, we expect EBITDA to decline 1.9% versus our previous assumption for 0.5% growth in 2003.

SBC is currently trading at roughly 13.3 times our new 2003 EPS estimate. Given that we do not expect the company to generate enough growth to reach its 2001 EPS of \$2.35 until 2006, we believe it will be difficult for it to outperform the market at these levels. In calculating our lowered 12-month price target of \$30, we conducted a discounted cash flow analysis, employing a 7% discount rate, a terminal value that assumes 2.5% perpetuity growth and a 20% private market discount.

Table 13: Changes to SBC Estimates (\$MM)

	2002					200	% growth			
	Old	New	\$ change	% Change	Old	New	\$ change	% Change	Old	New
Wireline Revenue	38,768	38,601	-167	-0.4%	38,884	37,482	-1,402	-3.6%	0.3%	-2.9%
Total Revenue	52,372	52,205	-167	-0.3%	52,937	51,535	-1,402	-2.6%	1.1%	-1.3%
EBITDA	21,377	21,357	-20	-0.1%	21,479	20,958	-521	-2.4%	0.5%	-1.9%
Net Income	7,728	7,715	-13	-0.2%	7,811	7,462	-349	-4.5%	1.1%	-3.3%
EPS	\$2.31	\$2.31	(\$0.00)	-0.2%	\$2.36	\$2.25	(\$0.11)	-4.5%	2.1%	-2.3%

Source: UBS Warburg LLC estimates

#### **BellSouth—Disproportionate Impact**

BellSouth has lost 1.12 million lines to UNE-P, including 278,000 in the second quarter. This equates to quarterly loss of 1.2% of BellSouth's 23.9 million total retail access lines while the imbedded base equates to 3.9% of the company's total switched lines. The company saw UNE-P net adds grow rapidly in the first quarter to 239,000 from 96,000 in the previous quarter, growing somewhat more slowly in the second quarter at 278,000. Similar to SBC, business UNE-P line adds have fallen recently while pressure builds in the residential market.

Table 14: Access Line Statistics for BellSouth (000s)

	1Q01	2Q01	3Q01	<u>4Q01</u>	1Q02	2Q02
Total access lines	25,898	25,666	25,575	25,422	25,425	25,138
% growth	0.1%	-0.8%	-1.4%	-1.9%	-1.8%	-2.1%
Net Adds	-10	-232	-91	-153	3	-287
UNE-P	303	385	505	601	840	1,118
Net Adds	79	82	120	96	239	278
% of total lines	0.3%	0.3%	0.5%	0.4%	0.9%	1.1%
Retail residential lines	16,703	16,520	16,417	16,230	16,112	15,777
% growth	-0.9%	-1.5%	-2.0%	-2.7%	-3.5%	-4.5%
Net Adds	23	-183	-103	-187	-118	-335
Residential UNE-P	106	114	158	185	365	586
Net Adds	6	8	44	27	180	221
% of res lines lost	Na	4.4%	42.7%	14.4%	152.5%	66.0%

Source: UBS Warburg LLC estimates

BellSouth appears to have the second worst UNE-P economics, marginally worse than Verizon Behind SBC, BellSouth appears to have the second worst region in terms of UNE-P economics, being marginally worse than Verizon. Its average revenue lost per line is \$18.29 per month while its lost EBITDA per wholesale line is \$15.65, versus \$17.04 for SBC. We believe BellSouth produces the most EBITDA per wholesale line on a weighted average basis, at \$2.47 per month. Only in Kentucky does the company generate negative EBITDA per wholesale line.

While BellSouth does not currently release line statistics on a per state basis, we believe much of the line loss is being felt in Florida and Georgia. The loss in Georgia is coming from AT&T's efforts in the Atlanta metropolitan area. In Florida, the company has lost approximately 300,000 retail lines (more than one-half of its 586,000 retail residential lines lost) to a single provider that has not paid BellSouth in a number of months. BellSouth is not booking the wholesale revenues from this customer. Therefore, the company is seeing a disproportionate impact of the line loss on its income statement as it loses retail revenues without the partially offsetting benefit of new wholesale revenue.

Due to the nonpayment, we estimate that BellSouth loses about \$33.99 in revenue per local line lost to this competitor per month in Florida. With estimated UNE-P rates of \$16.69 in Florida, the net revenue impact would be roughly \$17.30 per line per month, below the national average, if the company were recognizing wholesale revenues from this carrier. On an EBITDA basis, the impact again would be in line

with the national average at roughly \$14-15 per line. However, without payment, our analysis suggests that the company is losing an estimated \$31.50 in EBITDA per line per month for each line lost to this nonpaying competitor. BellSouth has filed suit against the company in an effort to force payment or stop service. Management expects a resolution late this year or early next year. However, until the situation is resolved, BellSouth expects to continue to lose 30,000-40,000 lines to this carrier per month.

We expect BellSouth to lose roughly 300,000 lines to UNE-P in the third quarter and 400,000 in the fourth quarter. Again, the economics impact should be more resounding because of the nonpayment of its main competitor in Florida. As we look out into 2003, the company is in a favorable position, as many of these UNE-P lines should flow back to BellSouth. Additionally, the company is expected to have Section 271 approval within seven of its states, representing 57% of its access lines by September 18 and all its states in mid-2003. However, we believe it to be a good assumption that AT&T will enter the state in the not too distance future. This is based on the economics in Florida, which currently provides gross margins of 60% of sales (fully loaded revenue per line less the estimated UNE-P rate) to rebundlers, the state's contribution to international calling minutes, and BellSouth's delayed entry into long distance in the state.

#### **Estimates and Valuation**

Based on changes to our model, we are reducing our 2003 EPS estimate for BellSouth to \$2.02 from \$2.18. This translates to a 1.9% decline in EPS in 2003 versus our previous estimate for 1.9% growth. We now expect total revenues to grow just 0.4% in 2003 following the 0.3% decline in 2002. Our previous estimate suggested 1.1% growth in revenues. We now expect EBITDA to decline 0.2% versus our previous assumption of 2.2% growth in 2003.

Given our new estimates, BellSouth is currently trading at 13.2 times our new 2003 estimate, similar to SBC. The stock currently pays a 3.1% dividend that is not at risk given our revised estimates and should provide some support to the shares. Our lowered 12-month price target of \$26 is based on a discounted cash flow analysis employing a 7.5% discount rate, a terminal value that assumes 2.5% growth in perpetuity and 20% public market discount.

Table 15: Changes to Estimates (\$MM)

				2	% growth					
	Old	New	\$ change	% Change	Old	New	\$ change	% Change	Old	New
Wireline Revenue	18,421	18,312	-109	-0.6%	18,731	17,993	-738	-3.9%	1.7%	-1.7%
Total Revenue	29,009	28,900	-109	-0.4%	29,582	28,842	-740	-2.5%	2.0%	-0.2%
EBITDA	12,837	12,784	-53	-0.4%	13,120	12,761	-359	-2.7%	2.2%	-0.2%
Net Income	4,035	3,925	-111	-2.7%	4,217	3,838	-379	-9.0%	4.5%	-2.2%
EPS	\$2.14	\$2.09	(\$0.05)	-2.3%	\$2.18	\$2.02	(\$0.16)	-7.2%	1.9%	-3.2%

Source: UBS Warburg LLC estimates

Verizon has lost 2.4 million retail lines to UNE-P so far, equating to 3.9% of total access lines

#### **Verizon—Showing Least Impact So Far**

Verizon has lost 2.4 million retail lines to UNE-P so far, equating to 3.9% of total access lines. Verizon lost the fewest retail lines in the second quarter, with just 110,000 UNE-P net adds, up from 64,000 in the prior quarter. It appears as if a large portion of the growth is coming from resold lines that are being converted to UNE-P, as the total number of wholesale lines remained essentially flat. Most of the line loss is coming from New York, where rebundlers are estimated to have a 13.1% market share, based on FCC data.

Table 16: Access Line Statistics for Verizon (000s)

	<u>1Q01</u>	<u>2Q01</u>	3Q01	<u>4Q01</u>	1Q02	2Q02
Total access lines	62,903	62,465	61,967	61,551	61,227	60,373
% growth	0.6%	-0.4%	-1.4%	-2.1%	-2.7%	-3.3%
Net Adds	1	-438	-498	-416	-324	-854
UNE-P	1,645	2,093	2,138	2,195	2,259	2,369
Net Adds	-42	448	45	57	64	110
% of total lines	2.6%	3.4%	3.5%	3.6%	3.7%	3.9%
Retail residential lines	37,795	37,753	37,343	37,231	37,119	36,746
% growth	na	na	na	-1.5%	-1.8%	-2.7%
Net Adds	8	-42	-410	-112	-112	-373
Residential UNE-P	1,155	1,209	1,388	1,407	1,461	1,533
Net Adds	-31	54	179	19	54	72
% of res lines lost	na	Na	43.7%	17.0%	47.9%	19.4%

Source: UBS Warburg LLC estimates

The company's access line base produces negative EBITDA of \$0.68 per line per month on a wholesale basis

UNE-P economics for Verizon are similar to those of BellSouth, with average revenue loss per month per line converted to wholesale of \$17.89 and average EBITDA loss per month of \$15.26. In six states, wholesale lines generate negative EBITDA, including New York, the company's largest state. Pennsylvania and New Jersey, the next two states expected to be hit with UNE-P competition from AT&T, are roughly break-even at the EBITDA line on a wholesale basis. In total, the company's access line base produces negative EBITDA of \$0.68 per line per month on a wholesale basis.

We believe retail lines lost to UNE-P will grow to 230,000 in the third quarter and 500,000 in the fourth. AT&T has stated it intends to ramp up marketing efforts in New York to take advantage of recently lowered UNE-P and higher retail rates in the state. The company is also expected to enter New Jersey, Verizon's third largest state, in September. On its second quarter conference call, AT&T stated it would enter Pennsylvania, Verizon's second largest state, by year-end. As a result of these competitive incursions, we believe Verizon will lose 1.8 million access lines in 2003.

Verizon has the largest debt load of the three pure-play Bells; downgrade of its debt is likely, in our view

Verizon has the largest debt load of the three pure-play RBOCs, at \$56.5 billion as of the second quarter, pro forma for its recent sales of access lines. Moody's has been taking a harder look at the Bells based on deteriorating fundamentals that are partially due to incursions from UNE-P based providers. UBS Warburg fixed income analyst Phillip Olesen expects a one or two notch downgrade of the company's credit rating

in the near term. The company may also lose its P1 commercial paper rating despite the more than 30% reduction in its CP balance since the beginning of the year. This would make it more difficult for Verizon to roll over its estimated balance of \$8.5 billion in CP. We believe the results we have outlined above, driven by our analysis of UNE-P, makes a potential downgrade of Verizon's credit rating more likely, potentially increasing borrowing costs and raising risks to equity shareholders.

#### **Estimates and Valuation**

We lowered our 2003 EPS estimate for Verizon to \$2.96 from \$3.12 based on changes to our model that incorporate additional line losses from UNE-P. This equates to a 0.7% decline in EPS versus our previous 2002 EPS estimate of \$3.05. We previously expected growth of 2.3% in EPS. We now expect revenues to decline 0.2% in 2003 compared with our previous expectations for growth of 0.5% in 2002. EBITDA is also expected to decline 2.1% in 2003. Our lowered 12-month price target of \$34 per share is based on our revised discounted cash flow analysis that includes a 6.8% discount rate, a terminal value with 2.5% perpetuity growth assumption and 20% public market discount. The company trades at 11.3 times our new 2003 EPS estimate.

Table 17: Changes to Estimates (\$MM)

	2002					2	% growth			
····	Old	New	\$ change	% Change	Old	New	\$ change	% Change	Old	New
Wireline Revenue	40,912	40,897	-15	0.0%	39,655	39,136	-519	-1.3%	-3.1%	-4.3%
Total Revenue	66,737	66,722	-15	0.0%	67,092	66,575	-518	-0.8%	0.5%	-0.2%
EBITDA	29,049	28,772	-277	-1.0%	28,836	28,160	-676	-2.3%	-0.7%	-2.1%
Net Income	8,332	8,150	-182	-2.2%	8,587	8,130	-457	-5.3%	3.1%	-0.2%
EPS	\$3.05	\$2.98	(\$0.07)	-2.2%	\$3.12	\$2.96	(\$0.16)	-5.1%	2.3%	-0.7%

Source: UBS Warburg LLC estimates

#### Statement of Risks

Risks include management's ability to execute potential adverse changes in regulation, changes in technology, the effects of a weak economy, increasing competition, and a large degree of operating leverage.

# **UNE-P Regulation**

UNE-P regulation is created by the state PUCs, the courts, and the FCC. In general, the states want to see more competition and lower prices for consumers and believe UNE-P to be the answer. The courts want to make sure UNE-P is regulated in accordance with the Telecom Act. Meanwhile, the FCC, now under Commissioner Michael Powell, has yet to weigh in on the subject. The FCC is expected to issue new rules pertaining to UNE-P within the framework of its Triennial Review of Unbundled Network Elements currently underway. This review is expected to be completed by year-end; however, we believe the outcome may be delayed into 2003 because of the current unrest within the industry.

In the FCC's review of UNE regulation, it must weigh two major court cases that took issue with the FCC's interpretation of impairment. In 1999, the Supreme Court found the FCC's definition of impairment to be too broad and remanded the rules regarding UNEs back to the FCC. At that point, the FCC revised its definition to require unbundling if self-provisioning by a new entrant or acquiring facilities from a third-party supplier materially diminish the entrant's ability to offer the service. ILECs argued that this definition also did not fully comply with the Supreme Court's decision because it did not impose meaningful limits on ILECs' unbundling obligations. The Court of Appeals for the District of Columbia heard the case and, on May 24, unanimously remanded it back to the FCC for further review, suggesting that its open-ended approach to UNE-P should be modified.

The Court of Appeals concluded that the FCC implemented a uniform rule, mandating the availability of unbundled network elements in every geographic market or customer class, regardless of impairment in any particular market. It states that "Congress did not authorize so open-ended a judgment" as to suggest that "more unbundling is better." The court recognized that alternatives to RBOC switching and transport exists. Within its ruling, the court discussed the existing build-out of inter-office transport. It noted that in 47 of the top 50 markets, there are three or more competitors providing transport between central offices.

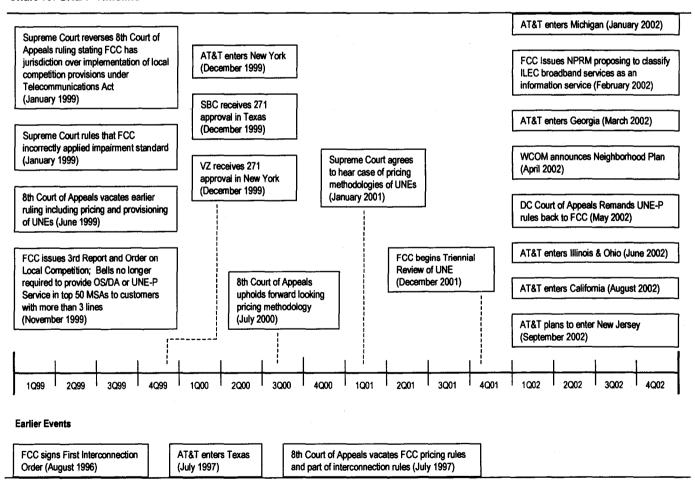
A possible outcome of this may be a reduction in the number of UNEs available to rebundlers on a market-by-market basis. The Bells argue that the FCC should eliminate, limit, or curtail access to local switching and transport as a required UNE in certain (highly saturated, urban) markets where alternative providers have installed facilities. Competitors argue that the existence of facility-based providers does not necessarily indicate there is a competitive market for wholesale switching. We believe a change in the bundle of elements the Bells are required to provide would be a blow to the profitability and rate of growth of UNE-P lines. Provisioning lines using owned or third-party facilities is time-consuming and can become expensive. UNE-P allows local competitors to add customers very quickly through a fully automated process that is unavailable to facilities-based competitors required to provision every line sold.

The leadership of the FCC has changed since the rules regarding local interconnection were hammered out and that this will be Chairman Powell's first substantial proceeding on the subject. In the past, Chairman Powell has voiced his support for facilities-based competition and has maintained publicly that CLEC "access to central

office co-locations and the local loop are essential." He has not mentioned switching or interoffice trunking as essential. However, the regulatory environment is becoming increasingly politically charged because of the high profile bankruptcies that have roiled the sector, making it unlikely that the FCC would implement rules that were seen to harm consumers.

In the end, the Triennial Review may prove less meaningful than expected because of a number of state rulings that force the RBOCs to continue providing UNE-P despite any changes to regulation. Many states are likely to claim jurisdiction over UNE-P as an intrastate issue. The FCC itself may decide to abrogate responsibility for determining the existence of competition in a particular area of the states based on their knowledge of local markets, further clouding the final outcome. It is also possible that the FCC could eliminate the use of UNE-P in the business market. This would have very little impact into the pace of UNE-P line growth, as the business market has not been the focus of major resellers. We believe any changes likely would be phased in over a transitional period to provide operators with an opportunity to add their own facilities, find other wholesale providers, or renegotiate contracts with existing suppliers.

Chart 10: UNE-P Timeline



Source: UBS Warburg LLC and FCC